DECEMBER 1970 THE JOURNAL OF THE NATIONAL EDUCATION ASSOCIATION

Today's Education

POLLUTION page 14

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This feature is an open forum for TODAY'S EDUCATION *readers. Ideas and opinions expressed here are those of the writers and not necessarily of the NEA. (When writing, please indicate school, position, and home address, including ZIP Code.)*

"Then" Language and "Now" Generation

In your current issue, I was so struck by the article on the teaching of literature (Virginia R. Mollenkott's "Literature and the Now Generation," October) that I sent it on to my son, who teaches English at Illinois State University. (Freshman English is a difficult problem, and my son is seriously concerned about how to get those youngsters truly *involved* in literature.)

Back to the article: Good as it is, it fails to mention a major difficulty, namely, the archaic and poetic language of Shakespeare and the old ballads. However *relevant* the social problems involved, they are almost concealed from the "now" generation by the "then" language. (Of course, there are exceptional students, but I think the generalization is fair.)

So the teacher faces the alternatives: "tell them the story," or explicate the language, line by line—than which nothing is more lethal to poetry, to literature in general, or to student interest.

My son's approach is, I think, a reasonable one: Start with the contemporary, the "now" (such as Arthur Miller's *Death of a Salesman* or Tennessee Williams' *Glass Menagerie*), and gradually back up to the old masterpieces. No doubt many teachers are doing this, and I'm astonished that your author didn't mention it.

—Elton Hocking, *professor emeritus, Purdue University, Lafayette, Indiana.*

A Spelling Error

While vacationing in another state, my family noticed something wrong with the name of this school. It seems their teaching would be quite elementary.

—Ted Kramer, *ninth grader, Western Junior High School, Chevy Chase, Maryland.*

On UNESCO Insert

I can't begin to tell you how pleased I am personally and on behalf of the Commission with the special feature on Unesco (October). It is beautifully done, both aesthetically and editorially.

—A. Marvin Braverman, *chairman, the United States National Commission for Unesco, Washington, D.C.*

Unesco Footnote

NEA members may be interested in a footnote to the Unesco article in the October Journal:

When the first Unesco conference was held in Paris in 1946, the NEA was ably represented by NEA President Pearl Wanamaker, who served as an adviser to the United States Delegation. An adept advocate of education, Mrs. Wanamaker made delegates aware of the importance of the "e" in Unesco.

—Braulio Alonso, *director, NEA Committee on International Relations.*

After All, You Know . . .

For years my pupils asked why well-educated adults frequently say "you know" as a filler. The gist of my reply to them was comparable to that in "After All" (September). Thank you for putting it into print.

Another expression that annoys me is "I want to . . . thank you" or "I want to . . . introduce Mr. So-and-So."

—Hannah Harbert, *former high school English teacher, Galax (Virginia) City Schools.*

I was intrigued with your "After All" comment in the September issue.

When I was nine years old (that was 50 years ago), a relative of mine used the expression "you know" frequently in her conversation. I was aggravated with the term, because I felt that she was using it to cover up some choice bit of gossip that my "pitcher" ears were missing. Much later I reasoned that she was grasping for words that eluded her.

Now I KNOW that this absurd expression is back to haunt me. Six months ago I gave a five-minute diatribe to my family regarding its improper use. It is an abomination to the spoken word.

—Clifford B. Hoard, *Morgantown; member, West Virginia House of Delegates.*

This Is Fun???

I was eager to read the article "Fun and Games" by Joseph Roscoe ("Light Touch," October) with the hope of getting some ideas or suggestions about new games, but felt disappointed after reading it.

It seemed the editors reached the bottom of the bag to get a story like that for a most interesting magazine, TODAY'S EDUCATION. It is quite difficult to comprehend the purpose or the worth of the story. We can read the comics for laughs.

I doubt that the ladies of those days were capable of throwing a volley-ball to cause "occasional screams of joy and pain" in a game known today as Bombardment. Also, in view of the dignity that ladies had in those days, I doubt seriously if they would have stooped to play a game like Over and Under with skirts below their knees.

—C. P. Newdome, *supervisor, health and physical education, Mobile County, Alabama, public schools.*

(*Continued on page 7*)

COMING

A report on one junior high school's successful program to improve school-community relations

An "Opinions Differ" piece on the Scranton report on campus unrest

A "Searching Mind" article about what we have learned from the U.S. moon landings

An article describing the social activities engaged in by the students of middle schools in Howard County, Maryland—activities that are geared to the needs of the pre-adolescent

Today's Education

THE JOURNAL OF THE NATIONAL EDUCATION ASSOCIATION

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This month's cover

Would that this lovely Christmas pine stood alone in desecration in today's world.

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I certify that the statements made by me above are correct and complete.

Mildred S. Fenner, *editor*

Gallup Poll Shows Public Mood More Critical of Education

South Makes Educational Gains

State Boards of Education Urge Limits on Aid to Nonpublic Schools

Rulings Issued on Corporal Punishment of Public School Pupils

Court Rules Students Need Not Stand During National Anthem

NEWS AND TRENDS

Gallup Poll Shows Public Mood More Critical of Education

"There is undeniably a new mood in the nation with which educators must reckon," according to a special Gallup International poll of the public's attitudes toward public schools.

The survey, sponsored by CFK Ltd., a Denver-based foundation, and published in the October issue of the *Phi Delta Kappan*, includes these findings: 56 percent of respondents say they would vote against any request for additional taxes for schools; 67 percent of adults say they favor a system making teachers and administrators more accountable for pupil progress; 53 percent of adults oppose "tenure" rules that make it difficult to fire unsatisfactory teachers; 53 percent of respondents feel discipline is not strict enough in schools; 62 percent of respondents favor corporal punishment in lower grades; 64 percent of adults, but only 39 percent of high school juniors and seniors, describe the use of marijuana and other drugs as "a serious problem" in their schools.

Commenting on the poll's findings, Gallup International concludes that citizens are less willing than in the past to take the word of educators that the schools are doing a good job; instead citizens are seeking objective evidence to evaluate the quality of public education.

South Makes Educational Gains

The South made big educational gains in the 1960's, although its education average remains below the national average, according to figures released by the U.S. Census Bureau. Already, Southern adults are as likely as Northerners to have had some college education, the Bureau says.

Bureau analysts predict that the South will match the national average in education by September 1973.

State Boards of Education Urge Limits on Aid to Nonpublic Schools

A resolution calling for limits on the use of public funds for nonpublic schools was passed by the National Association of State Boards of Education during its annual meeting in October. NASBE members favored banning aid to nonpublic schools "under any circumstances which would jeopardize the welfare, stability, or support of the system of public education." By adopting this wording, NASBE left it up to the particular states to decide what circumstances, if any, would jeopardize public education.

Other resolutions adopted by NASBE include: Professional negotiations—the appropriate role of the state board of education in negotiations should be studied, since negotiations often engender hostilities which are disruptive to the educational process. Finance referenda—states should amend laws which require more than a simple majority of the votes cast to pass a school district bond issue, tax levy, or budget. Student involvement—students should be guaranteed certain basic rights, such as free inquiry, due process, peaceful assembly and petition, and freedom from discrimination, and should be allowed the privilege of assisting in the development of policy relating to school governance.

Rulings Issued on Corporal Punishment of Public School Pupils

Decisions on corporal punishment of pupils have been made recently in Maryland and in Pittsburgh, Pennsylvania.

The Maryland State Board of Education agreed to forbid corporal punishment after December 31. The board president said that "the unanimous consensus of opinion of this board is that corporal punishment has not proved itself an effective educational instrument in assuring discipline. . . ."

The Pittsburgh School Board ordered corporal punishment abolished in grades K-4 in all schools effective September 1970, in the fifth grade next year, in the sixth grade in 1972, "and to all grades beginning with the September 1973 term."

Earlier this year the Dallas School Board agreed to extend the authority to administer corporal punishment from principals only (at their own discretion) to include teachers (providing they have parental permission). At the same time, Superintendent Nolan Estes persuaded the Board not to diminish the principals' authority by asking that they, too, act only with parental permission.

Court Rules Students Need Not Stand During National Anthem

A federal court in Columbus, Ohio, has ruled that students may not be suspended from school solely for refusing to stand during the singing of the National Anthem. The First Amendment prohibits forcing anyone to participate in symbolic patriotic ceremonies against his will, the court said.

Vocational Remedial Programs Fail for Urban Poor, Says Committee

Arizona Court Orders Student Admitted to Honor Society

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Anniversary Years Observed

Vocational Remedial Programs Fail for Urban Poor, Says Committee

Present vocational remedial programs for the urban poor have failed, the Committee for Economic Development has declared. Because of this failure, the nonpartisan committee of businessmen and educators calls for support of special training programs outside the regular system "until such time as the public and vocational schools demonstrate the capacity to perform adequately in educating the disadvantaged."

The committee—in a report, *Training and Jobs for the Urban Poor*—further says that young people need early opportunities to observe various occupations, better information regarding career choices, and constant vocational guidance. Also needed, it says, are opportunities for combining school and work, freedom to leave school early for those who believe they would benefit more from jobs than school, and job opportunities for those who leave school.

Arizona Court Orders Student Admitted to Honor Society

In a precedent-setting case, an Arizona court has ordered a Tucson-area school district to admit to membership in the National Honor Society a high school student whom a faculty committee had passed over on the grounds that he did not meet the organization's "character requirements."

The student claimed that the committee's decision was based on the fact that he wrote for an underground newspaper and participated in an off-campus peace demonstration without the school's permission. The Arizona Superior Court ruled that action was arbitrary and capricious, and in violation of the youth's First Amendment rights to freedom of speech and assembly.

Court Rules School Cannot Stop Distribution of Underground Paper

California laws used to prohibit distribution of underground newspapers at high schools have been overruled by a federal court in San Francisco.

Two Campbell, California, high school students who faced suspension if they continued distribution of their newsletter filed a suit testing the laws. The three-judge panel ruled that two State Education Code sections and some rules of the Santa Clara County High School were unconstitutionally vague.

The federal judges ruled, however, that school officials have the right to place some restrictions on the content of publications distributed on high school campuses and may enforce "reasonable time, place, and manner" regulations.

Two-Thirds of U.S. Colleges Saw Protest Incidents in 1969-70

More than 9,000 separate protest incidents occurred on two-thirds of the nation's college campuses during the 1969-70 academic year, according to a report of the American Council on Education. "This means that while the typical institution experienced an average of five protest incidents, one-third of our institutions were virtually untouched by campus unrest last year," Alexander W. Astin, director of ACE's research office, recently told an international seminar.

"The most frequent type of protest incident during the past year involved issues not directly related to the institution," Astin said. "Specifically I refer here to the various moratorium protests in the fall and winter, the observance of Earth Day, and the spring demonstrations against the Cambodian invasion and the killings at Kent State and Jackson State colleges. Earth Day involved the largest number of participants—44 percent of all institutions. This finding is consistent with our survey data on students, which indicate that environmental pollution is the greatest single concern of college students."

86 of the Nation's Colleges Act To Deprive Rioters of Funds

A total of 440 students lost federal aid during the last fiscal year as a result of their participation in campus riots and disruption, according to government figures. Rep. Edith Green (D-Oreg.), chairman of the House higher education subcommittee, said that 86 colleges out of a national total of approximately 2,600 withheld funds from students or faculty because of participation in disruptive activities.

Mrs. Green said that the campuses which have had major disturbances "are conspicuous by their absence" from the list of colleges which implemented the federal regulations. She said this indicates a "cavalier disregard of the law of the land" by colleges which have had most of the trouble.

Anniversary Years Observed

The National Council for the Social Studies, organized in Atlantic City in March 1921, is observing its 50th anniversary year. NCSS is a national affiliate of NEA.

The National Council of Teachers of Mathematics, also an NEA national affiliate, is celebrating its 50th anniversary this year too (see page 50 of this issue).

ZIP CODE

(*Continued from page 2*)

Coercion vs. Reason

My comment on "Police in Schools" (October) is that the invasion of educational systems by symbols of force, not reason, is a twentieth century American tragedy. From police monitors in schools to ROTC and Pentagon researchers and FBI agents on college campuses—all represent force and coercion in citadels where reason and reciprocity should prevail.

—Emerson Rutherford, *news writer, Bryan, Texas; former teacher of music and high school English.*

Some Say "Yes" for Letterheads

In answer to your query about the United Teaching Profession letterhead as recommended by Robert Haage (ZIP Code 20036, October), I would like to go on record as favoring such help from the NEA.

As membership chairman of my association, I feel that the letterhead I have developed is a beginning and that it does add a personal and professional touch to the dozens of memos that I send.

I believe, however, that stationery and memo pads from NEA would add even more "class" to what locals like ours are trying to do.

—Richard Fuller, *membership chairman, Madison Township (New Jersey) Education Association.*

I endorse the idea of NEA letterhead stationery for teachers. The NEA unification symbol could be used along with a symbol of the state teachers organization and perhaps an appropriate saying or quotation relating to education along the bottom of the sheet. A border of red and blue along the right and left margin to coincide with the NEA symbol would also add to a lively and attractive sheet.

—Raymond F. Ensher, *teacher of English and social science, North Fork (California) Union School.*

Continue Interaction Briefs?

For several years, staff members of the NTL Institute for Applied Behavorial Science (an autonomous organization associated with NEA) have prepared Interaction Briefs (monthly feature in TODAY'S EDUCATION). We want to continue doing so *if teachers are finding these participative learning experiences useful.*

A postcard to TODAY'S EDUCATION saying *"Yes* to Interaction Briefs" is all that is required.

You may also want to write NTL at NEA Center concerning our packet of ten selected Briefs from the past two years.

—Dorothy Mial, *NTL staff, Washington, D.C.*

A Pupil Responds

I taped Kendrick Wronski's article "The Teacher I Want To Be" (September) and played it for my sixth grade class. They were duly impressed, and the result was compositions on "The Pupil I Want To Be."

—Olga Schleher, *sixth grade teacher, Polk Street School, Franklin Square, New York.*

NEA-SPONSORED PROGRAMS

NEA Mutual Fund, Inc.—an open-end, diversified, common-stock fund with the objective of long-term capital growth. NEA members may invest in shares of the Fund at a 2 percent sales charge. (To obtain a prospectus, write to Educators Fund Management Corp., 1156 15th St., N.W., Washington, DC 20005.)

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Discount Books—a selection of nearly 100 books, including best sellers, classics, reference books, books for young readers, and the most popular titles from previous years' lists.

NEA Educational Travel Division—programs that provide educators with the highest quality travel at the lowest possible cost. Through college cosponsorship of certain tours, teachers, students, and administrators may earn academic credit. In-service credit may also be available.

TEACHER OPINION POLL

Drug Abuse in the Schools

☐ How widespread is the problem of drug abuse in elementary and secondary schools?

To investigate this topic, the NEA Research Division last spring asked a representative sample of the nation's public school teachers the following pair of questions: "Do you have personal knowledge of the use of narcotics by pupils in your school this school year? If Yes, is the use of narcotics by pupils a problem in your school?" Respondents to the second part of the question were asked to indicate whether the use of narcotics was a major problem, a minor problem, or no problem.

Almost one-fourth of the teachers responded that they had personal knowledge of drug abuse by pupils in their schools. Nearly one-fifth indicated that drug abuse was a problem in their schools, and 3 percent that it was a major problem.

More than two-fifths of the teachers in secondary schools said they knew of drug abuse by pupils. About one-third of the secondary teachers reported that drug abuse was a problem and 6 percent that it was a major problem.

Knowledge of drug abuse	Total	Elem.	Sec.
Yes, major problem	3.2%	0.8%	5.9%
Yes, minor problem	15.1	3.9	27.1
Yes, no problem	4.5	1.6	7.6
Yes, degree of problem not indicated	0.3	—	0.5
Total Yes	23.1	6.3	41.1
Total No	76.8	93.7	58.9

About 3 in 10 teachers in suburban schools were aware of the use of narcotics by pupils. This is a higher proportion than for either urban or rural teachers. The percentage of urban teachers who knew of drug abuse in their schools also exceeded the percentage of rural teachers. Among suburban teachers, 25 percent indicated that drug abuse was a problem in their schools, as compared with 18 percent of urban teachers and 8 percent of rural teachers. However, the percentages of teachers reporting that drug abuse was a major problem were small for all three types of communities.

Knowledge of drug abuse	Urban	Sub-urban	Rural
Yes, major problem	2.9%	4.8%	1.2%
Yes, minor problem	15.2	20.1	7.1
Yes, no problem	4.0	4.2	5.7
Yes, degree of problem not indicated	0.2	0.3	0.2
Total Yes	22.3	29.4	14.2
Total No	77.8	70.6	85.7

The information gained from teachers in this survey suggests that while drug abuse is not at present a major problem in most of the nation's schools, a significant drug problem does exist among secondary school pupils, especially in suburban communities.

—*NEA Research Division.*

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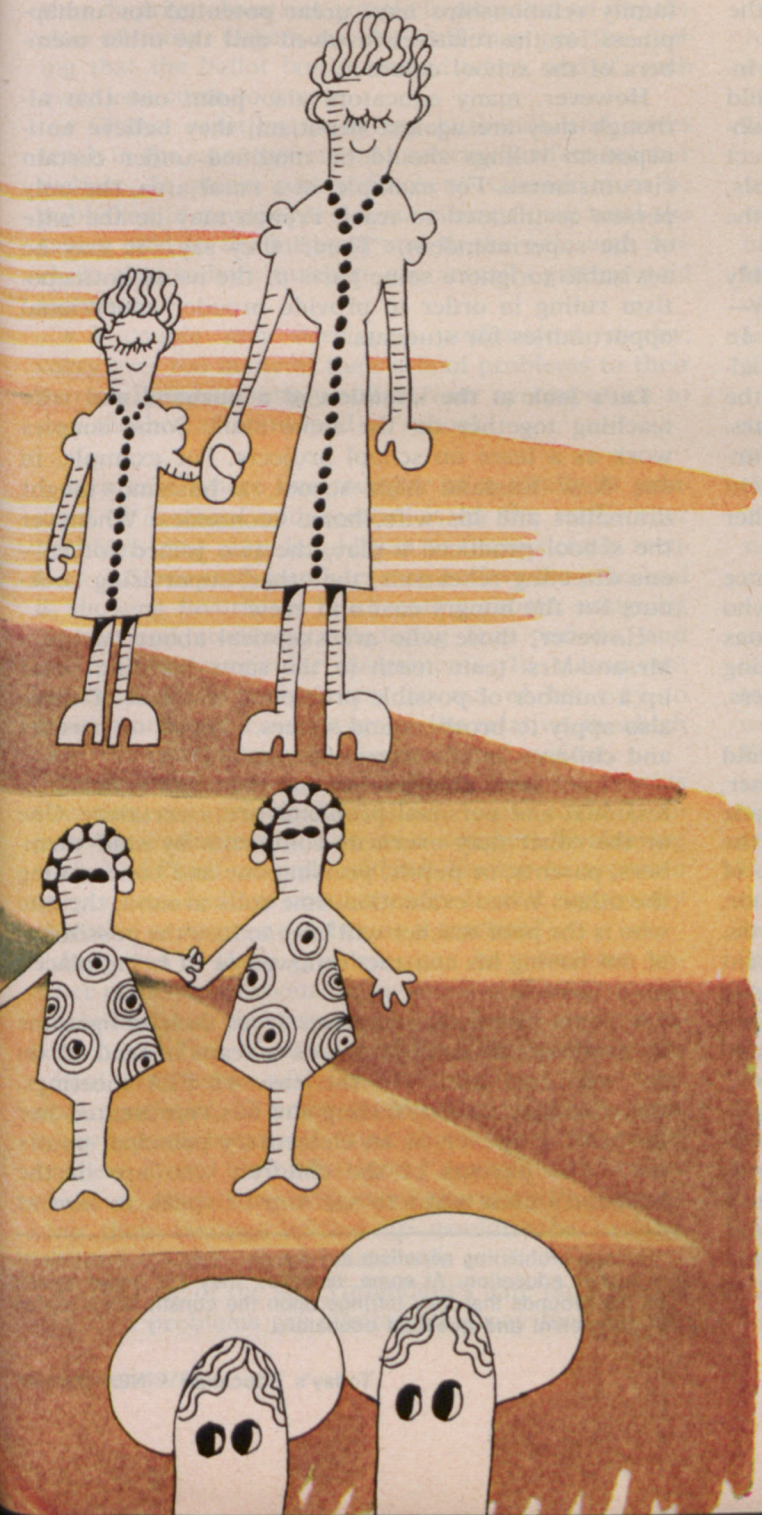
FAMILY RELATIONSHIPS IN THE SCHOOL

◆ In preparing an article on the subject of members of the same family who go through the grades in a particular school, JOURNAL editors interviewed classroom teachers, administrators, guidance counselors, and school psychologists from many different states. We found them eager to discuss, in addition, other family affiliations—members of the same family working on the same staff or in the same system or educators' children attending school in which their parents teach or serve as administrators. They said that these situations also involve delicate interpersonal relationships in the schools.

The following article is a presentation of opinions and experiences of our interviewees and not a statement of NEA policy.



Not long ago a mother reminisced about her three children's school careers. The first, a bright, well-behaved girl; the second, a boy who had been a hellion; and the third, an artistically inclined girl, had all attended the same small town school. When the youngest entered third grade, Miss Smith, the teacher, greeted her with, "Now, will you be a Louise or a Henry?" The child replied, "I'll be me, Mary."

Do educators compare members of the same family who go through the grades in one particular school? Of course, they do. It's just human nature to compare children—and adults too, for that matter. But simply because it happens doesn't mean it's a productive means of building healthy human relationships. In fact, comparing students is probably one of the more damaging activities educators can engage in.

A few compare members of the same family because they mistakenly believe such comparisons are good motivational devices. "John, you should take geometry. Your brother was a fine math student, and I know you can match his record."

Some educators—victims of stereotyped thinking—classify entire families as bright, hard workers, or good-for-nothings, because of their race, ethnic background, religion, or economic status. "Well, you can't expect much more from Joseph. I've had the other Jukes children, and the kids in that family just don't have it." One psychologist explains that because of "the halo of depression" that surrounds the teacher when Joseph enters his class, the boy will probably fulfill the teacher's prophecy of being a kid who doesn't "have it."

A few educators make family comparisons maliciously. As one classroom teacher put it, "They literally tear a kid apart because he doesn't fit their previous conception of what he should be like, based on having had his cousin or sister in class. Of course, such vicious comparisons are usually made in the teachers' room, but these teachers must be transferring some of these feelings to the kid in class."

Large numbers of teachers say things in the classroom that their students mistakenly assume are comparisons of them with other members of their families. For example, simply to identify one of all those new faces on the first day of school, a teacher may say, "Oh, Mary Elkinson. Are you Susan's sister?" and Mary may feel she's being compared in a complimentary or uncomplimentary manner with Susan—depending on Mary's view of how teachers evaluate her sister.

Even though teachers agree that they often compare members of the same family, they speak out strongly against the practice. One teacher of special education classes for 15 years flatly states: "Children—especially youngsters in the same family—should never be compared, because no two children are alike. They do not perform alike; they do not think alike; they do not want the same things out of life."

Of course, parents themselves frequently make these comparisons. Almost every teacher has talked with parents who are concerned that "Kevin isn't getting the good grades that Kathleen did." Teachers

of special education classes report extremely serious problems in families where parents refuse to recognize that one of their children is exceptional—mentally retarded, emotionally disturbed, physically handicapped.

And, of course, the kids also do the comparing. A veteran guidance counselor states: "I've counseled a lot of younger brothers or sisters who followed older brothers or sisters through high school and who were desperately trying to live up to the latter's reputation as athletes, students, or nuisances. I usually can convince these kids that since they have a different set of genes, they have different traits and talents, which make them individuals and not carbon copies of their big brother or sister."

What constructive action can educators take to deal with the problem of comparing members of the same family?

- Units in certain courses in teacher-education institutions (perhaps in sensitivity training) should prepare teachers to cope realistically with this problem. In-service training programs on this subject can do the same for teachers already in the schools, and special PTA programs can alert parents to the problem.
- Whenever possible, administrators probably should not schedule members of the same family—twins or cousins, for example—in the same class. In some schools, especially on the elementary level, administrators can try to avoid placing members of the same family with the same teacher in successive years. One elementary principal maintained such an unwritten policy for 20 years. He claims this system avoided as much as possible the chance of teacher comparison of relatives—especially siblings.
- Certain school specialists, such as guidance counselors and psychologists, can help the pupil who is under undue pressures because of comparisons with his relatives. To be effective, such counseling usually must involve the pupil's parents and teachers.

Of course, sometimes a teacher may set a child aglow by mentioning his family. One former teacher, now in his sixties, has fond memories of his first grade teacher. He says, "I can still see her standing at the door on the first day of school, greeting each one of us individually. When I walked through the door, Miss Wilson said, 'Oh, Gregg, I'm so glad to meet you. I know your sister Carolyn very well.' And as we went out the door on the last day of school, she shook each hand and said, 'I hope I'll teach another brother or sister of yours.' I'll never forget Miss Wilson and how important and special she made each of us feel."

"I turned down the first teaching job I was ever offered—a job I really wanted—when I inadvertently learned that the principal of the school I was supposed to teach in was the brother of the superintendent of schools," reminisced an educator with 20 years' experience as a classroom teacher and principal. "I felt that the situation might be unhealthy."

Elementary and secondary teachers express little reservation about having members of the same family—brothers and sisters, parents and their children, husbands and wives, and in-laws—working together as equals in the same school system in different buildings. They have qualms, however, about having family members serving in the same school building. Furthermore, if one of the family members is in a supervisory position—the principal or the superintendent or a school board member—the qualms turn to quakes.

To preclude allegations of nepotism, a number of school systems have policies, written or unwritten, against hiring members of the same family in the same school or in the same system and/or against hiring relatives of board members.* Many educators in the elementary and secondary schools would agree with such rulings in the belief that these types of family relationships have great potential for unhappiness for the relatives involved and the other members of the school community.

However, many educators also point out that although they are against nepotism, they believe antinepotism rulings should be modified under certain circumstances. For example, in a rural area, the only person certificated to teach French may be the wife of the superintendent. "Then," they say, "it may be advisable to ignore some parts of the usual antinepotism ruling in order to provide broader educational opportunities for students."

Let's look at the situation of a husband and wife teaching together on the same staff. Some couples work as a team on school projects. For example, in one New England high school, a husband taught dramatics and his wife, home economics. Whenever the school produced a play, the two joined forces—one directing rehearsals, the other, supervising cookouts for the hungry cast and crew.

However, those who are skeptical about having a Mr.-and-Mrs. team teach in the same building point up a number of possible problems. (Several of these also apply to brothers and sisters, in-laws, or parents and children in the same situation.)

- If one is an able teacher and the other is not, professional and personal problems are a certainty. One or the other may overhear comments by staff members, parents, or pupils, praising one and condemning the other. When evaluation time rolls around, the one who is the poor teacher will have to face the possibility of not having his contract renewed or of being placed on probation.
- Some husbands and wives treat their obligations to professional associations as a team instead of on an individual basis. In the case of PTA meetings, the wife may attend, feeling she has represented her husband. However, as an elementary principal points out, "The parents of the children who are in the husband's class want to see *him* or speak to *him* at

*Rulings prohibiting nepotism are not uncommon in institutions of higher education. At some, however, they are under attack on the grounds that they infringe upon the constitutional rights of competent and qualified educators.

the meeting. They have no relationship with his wife."

Husbands and wives can be a "drag on the efforts of the organized teaching profession," notes one Midwestern teacher who is active in association work. Sometimes, only the husband will join the professional associations. "I've joined. That's enough for both of us," he'll say. "I get the magazines and other materials. We don't need two copies of these periodicals at our house." In other cases, the couple won't be concerned about getting actively involved in association efforts to improve teacher salaries because they have a combined income, twice the amount perhaps of the single teacher or the teacher whose spouse doesn't work.

- In every school, staff members must debate sticky questions from time to time. When they do, husbands and wives may publicly agree on an issue, whether they do privately or not, simply to maintain an impression of unity. Others on the staff may get the feeling that the ballot box is stuffed when, and if, such questions come to a vote.
- Citizen reaction to having husbands and wives teach in the same system may adversely affect teacher welfare. In places where teachers' salaries must be published in newspapers, some citizens may total the salary paid to the husband and to the wife and conclude that today's teachers are actually getting paid too much.
- A couple may develop a professional rivalry, carry over too many of their school problems to their private lives, or simply suffer from overexposure to one another at home and at school.

In a case where one member of a family is principal of a school and another is on the staff, other problems may arise in addition to those already mentioned. Some staff members may believe the principal is showing favoritism in allocating rooms, assigning classes and students, scheduling free periods, and making extracurricular assignments. To circumvent criticism, the principal may go out of his way to avoid granting special favors to the relative, in which case, the relative may be discriminated against.

In pointing up another problem inherent in this situation, one principal exclaims, "How could I objectively evaluate my wife as a teacher! Evaluating staff is difficult enough without having to separate my personal feelings about my wife from a supposedly objective assessment of her as a teacher."

And even if these problems can be overcome, another principal cautions, "How will a staff react to the teacher who is the principal's wife? Will staff members be as free to discuss their feelings about the school with her as with other colleagues?" This principal continues, "I never go into the teachers' room in my school, because I think that's the place where teachers should blow off steam. I don't think teachers would do that if my wife were there, and having to keep their feelings bottled up wouldn't be healthy for them or the school or my wife or me."

In the case of the superintendent's wife on a school staff, the problems are similar. She may feel, as one former superintendent put it, "like the lonely child on the playground."

If the wife or other close relative of a board member should join a school staff, some teachers get the feeling that "Big Brother is watching." A number of incidents have been reported where the wives of school board members were alleged to have influenced the board to fire a teacher or a principal.

In some towns where board members' relatives work in the system, many teachers are inhibited about speaking out about the school, its programs, and staff. Should the teachers' association be having difficulties with the board, many teachers become even more apprehensive about speaking out—especially at association meetings. They fear that the relative might report to the board member.

As the boy continued to argue with her decision to have the class begin a new project, the teacher announced with all the firmness she could muster, "Go to the principal's office at once. You're acting like my son, not like my student."

When the children of the board member or the superintendent go to school in the same district in which their parents have authority, the children may have some major problems—problems that develop because of this family relationship. So do the children of the principal or teacher who go to the same school as the one in which their parents work. And so do the parents of these children.

The overwhelming consensus is that these situations are more difficult for the children than for the parents. One veteran teacher whose children had attended the school in which she taught says, "If I could do it over again, I would never have my children in the same school with me. When I realize the resentment my children feel about those years, I shudder."

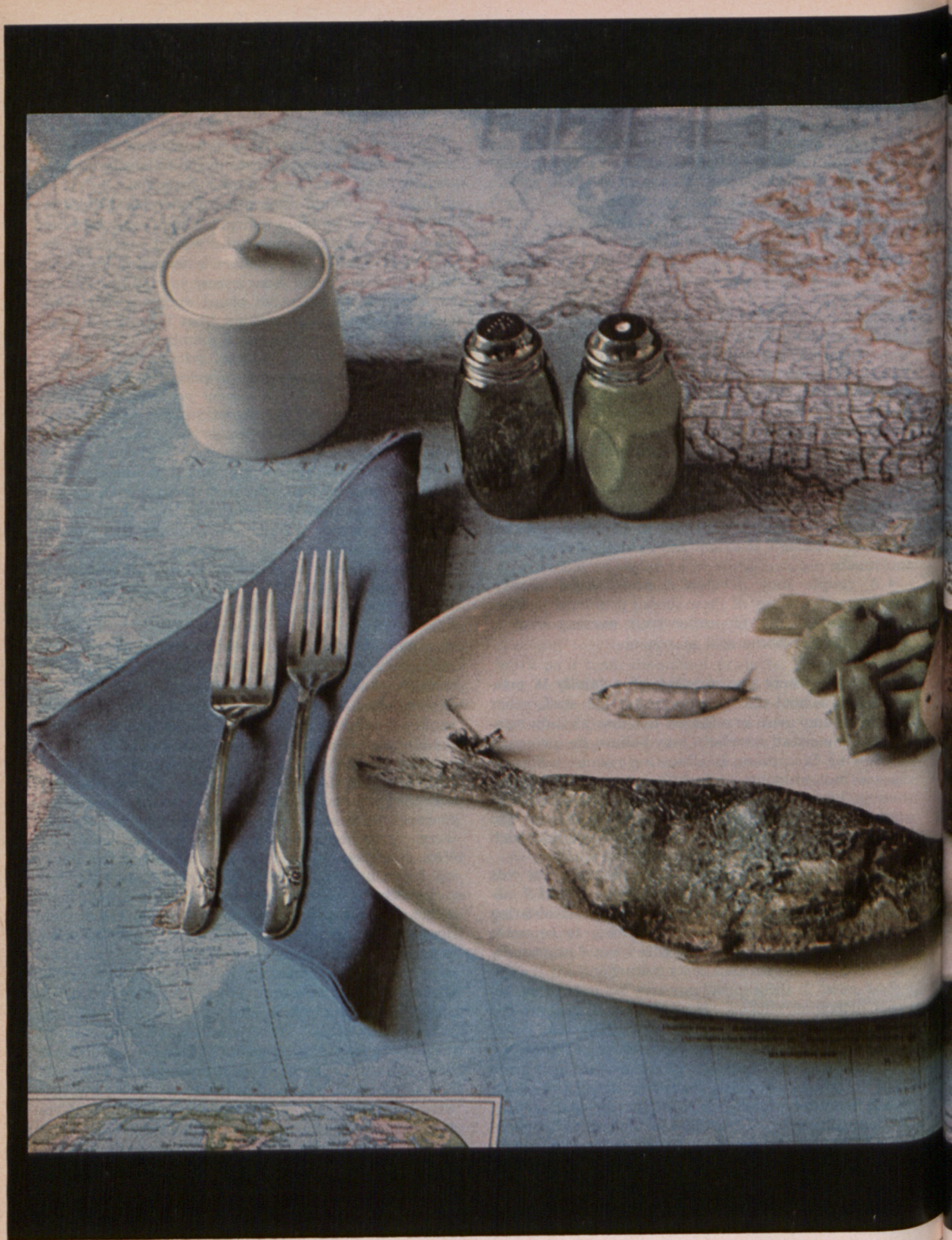
Many people expect the educator's child to be a model of behavior who conforms to all the rules and accepted standards. He does not have the freedom to rebel or to express emotions that he would if he were not in his father's school or his mother's class. He's "the principal's kid" or "the board member's kid," and in most schools everybody knows it.

Sometimes, other pupils, wittingly or unwittingly, attack Mr. Smith's kid because they don't like what his father has done. One educator with over 20 years' experience said that while his son was in the school in which he was principal, the boy was miserable. Often, he would question: "Dad, why did you do *that* today? It made the kids mad."

The attacks aren't all verbal either. A former superintendent reports this incident. "One day when there had been mild snow flurries, my young son was walking home after school. Several teen-age boys threatened him with a knife, saying, 'We'll take care of you good if your father doesn't call off school the next time there are signs of snow.' My boy arrived home, frightened and crying, unable to identify his assailants."

Mr. Smith's kid may face charges of favoritism, too.

(*Continued on page* 62)



Will contaminated food be tomorrow's "Special"?

SPECIAL FEATURE
ON WHAT SCHOOLS
CAN DO ABOUT

POLLUTION

THE CHALLENGE OF ENVIRONMENTAL EDUCATION

J. ALAN WAGAR, *associate professor of outdoor recreation, College of Forest Resources, University of Washington; and leader, Cooperative Recreation Research Project, Pacific Northwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture.*

☐ I am not an environmental educator. Rather, I am a researcher concerned, among other things, with studying the effectiveness of communicating en-

vironmental information and concepts to the public. As such, I am an analyst who stands somewhat off to the side and examines what the problems are, how current efforts are working, what seems to be needed, and how improvements might be made.

From my slightly detached point of view, I conclude that we face an environmental crisis and that the challenge of environmental education is no less than that of preventing disaster for the human race.

Our environmental crisis comes from an arrested mentality that still assumes the environment can absorb any insult we can hurl at it. But along with this caveman mentality we have a modern technology and a command of energy that permit us to commit environmental errors that may not be reversible.

For example, two-thirds of the world is already hungry, but as a species we are reproducing as if the earth had no limit. The land that must support these populations has often been abused beyond repair. We are dumping such poisons as lead, asbestos, radioactive materials, and pesticides into the environment. Perhaps of greater importance, we are adding carbon dioxide and particulate matter to the atmosphere in great quantities. The increased carbon dioxide could conceivably cause the earth to warm enough to melt the ice caps and thereby flood most of the world's major cities. Or, the particles in the air might block out so much of the sun's heat that the earth could experience another ice age.

Some may think I am too pessimistic: After all, they could reason, despite the doomsday predictions over the centuries, man has survived all of his problems so far. Furthermore, it is his great skill in problem solving that has made man the dominant species on earth—a species that now numbers more than three-and-a-half billion and poses a major threat to any species that gets in his way.

Although contemporary problems are enormous, a host of specialists are waiting to save us with schemes of many kinds. In view of all this talent, what is so important about environmental education?

In its simplest terms, environmental education is merely education for living effectively in an environmental situation that is turning out to be quite unlike what we have thought it to be. Our way of life is less and less appropriate to survival, and the task of correcting the situation is enormous, involving no less than a restructuring of some long-accepted attitudes in the American way of life. Essentially, we are talking about changing basic cultural values.

In trying to cope with the environmental crisis, we should avoid the witch-hunt approach of seeking "greedy corporations," "profiteering subdividers," "corrupt politicians," "misguided agencies," and "unscrupulous advertisers" upon whom to pile the blame. These people are not blameless and should not escape our scrutiny, but they are not so much the *causes* as they are *agents* for the rest of us. They can often claim—with some justice—that they are only practicing the good American virtues of progress, economic growth, free enterprise, and providing the public with an abundant life.

The blame comes home to roost. The causes, rather than being out there with "them," are right here with "us" and with some of our most cherished values.

Let me illustrate by reviewing some problems that spring from just four of our basic values: growth, laissez-faire, economic efficiency, and specialization.

First of all, we have an obsession with growth. This value made sense when a few settlers faced a nearly empty continent with vast spaces to be filled and rich resources to be tapped. In such an environment, an accelerating growth rate was feasible, even desirable.

But the earth is finite, and the end of growth is inevitable. Sooner or later, various limiting factors, such as lack of food or space and the diseases, parasites, and predators that flourish when a species is crowded, must slow down and eventually stop growth.

In all growing systems, there tends to be a slow start, a period of rapid growth, and finally a slowing and cessation of growth as various limiting factors are reached. When natural populations reach the levels at which limiting factors take effect, they can remain stable or they can become nearly extinct. (The latter occurred to the deer of the Kaibab Plateau, which become so numerous that they destroyed their food supply and then starved to death.)

Human populations, however, have a third alternative. Within limits, they can use technology to remove the limiting factors. This is exactly what has happened in the United States. Technology has so effectively removed the limiting factors encountered with population growth that we have come to believe in the possibility of an ever-expanding economy and ever-increasing growth. This belief, however, is complete nonsense in a finite world. If we avoid one limiting factor, another, perhaps more subtle, will take effect.

Currently, the limiting factors seem to be getting ahead of technology, and we are beginning to see that the effects of a growing economy include increasing smog, a vanishing countryside, the generation gap, death on our highways, crowded and substandard schools, growing restrictions on individual freedom, urban congestion, rising taxes, and a host of other problems.

At the same time that past growth has made future growth less and less desirable, it has also made some of our other values less and less effective. Our laissez-faire philosophy, for example, holds that the efforts of individuals to achieve their own self-interest will predictably lead to the common good. In pioneering times this assumption was often correct and workable because it provided the incentive for people to undertake the many tasks that needed doing.

But now there are many more of us, and we have growing access to mechanized energy that permits each of us to move about more and more. We occupy

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Dr. Wagar spoke at greater length on this topic at the 1970 national meeting of the American Association for Health, Physical Education, and Recreation, an NEA national affiliate.

space directly by rushing about in automobiles, boats, and other conveyances and indirectly by requiring great factories, power plants, highways, transmission lines, and so on. Because we are all neighbors now, the decisions of one person affect many others. If one man decides his self-interest is best served by raising hogs or by installing a gravel crusher in his backyard or by gouging a mountainside or by filling an estuary, the effects on the neighbors are direct and highly disagreeable. As a friend of mine phrased it, "Not only are there more of us but each of us has bigger elbows."

Closely related to laissez-faire is the idea of economic efficiency. From the point of view of either the individual or of an organization, the cheapest way has usually been the best way. For example, in the interest of economy, waste products were normally just dumped into the water, into the air, or onto the land—regardless of their effect on others or on the total environment. In other words, dollar costs were the only costs recognized by the specific person or organization making a decision. The same reasoning has even been applied to public services. Many highway departments, for example, have been charged *by law* with the building of highways at the lowest dollar cost, even if somewhat greater dollar investments would do less damage to scenery, farmland, small communities, or fish and wildlife habitats.

Our passion for specialization grew as times became increasingly complex and the way to success lay in doing only one thing at a time. We purposely narrowed the view so that each specialist could delve deeply and solve problems of great difficulty in one small area of inquiry. But such specialization has more and more drawbacks. As John Muir pointed out long ago, you can't do just one thing at a time because there are always side effects.

When we lived in a very spacious environment and each of us had access to very limited amounts of energy, the side effects didn't gang up on us but were generally dissipated into harmlessness. People could rightly claim that "the solution to pollution is dilution." But now, when the side effects of our activities have become some of our major problems, we are stuck with experts who are so specialized that they are often unaware of side effects.

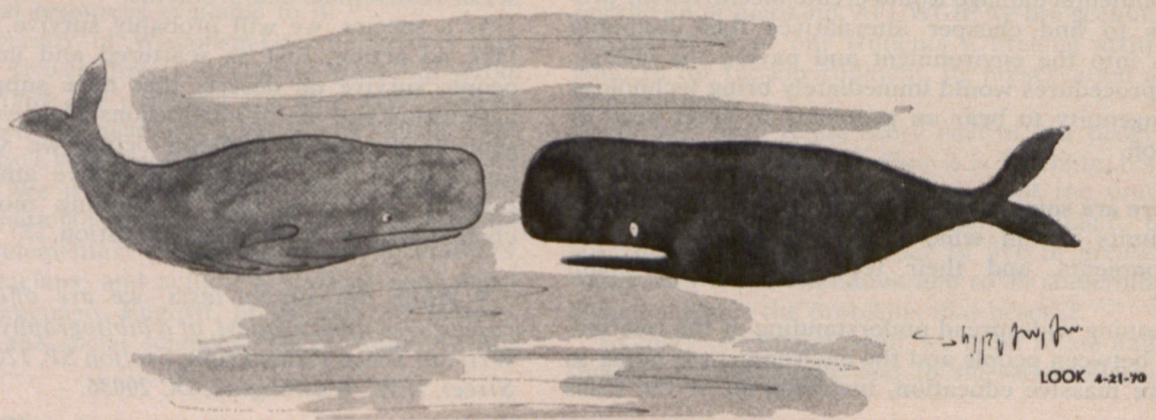
Many examples come to mind. The people who designed color TV were engineers, not medical scientists or geneticists, and they didn't know that some sets produced dangerous levels of X rays until after thousands of children had been exposed to them. Chemists, not ecologists, developed insecticides, and only after the damage was far advanced did they recognize that some insecticides were concentrated and passed along in biological food chains until they are now threatening eagles, falcons, ospreys, pelicans, and other species with extinction. Similarly, the specialists who developed automobiles weren't thinking of smog. The specialists who mechanized farming and thus cut down on the need for farm labor were not thinking of the consequent migration to the cities, which resulted in urban congestion with all its attendant problems.

The complexity of our society and technology is such that we must continue to rely on experts. But every expert must be sensitized to anticipate side effects and to recognize their growing importance. Part of every educated person's knowledge must be the idea that professional blindness to environmental consequences is no longer tolerable.

I have been saying that such values as growth, laissez-faire, economic efficiency, and specialization—values woven into the very fabric of our economic order—are also at the root of our fastest growing problems. If we don't modify these values, we face disaster.

On the other hand, disaster would be just as certain if we followed the suggestion of various campus radicals and summarily threw out the complex of values, technology, and organization that holds society together. Romantic as living without this "establishment" might be, we are far, far beyond the point of no return. To illustrate, it has been estimated that the entire earth would support only 10 million people at the hunting and gathering level of technology. North America alone might support two million. Currently, we have more than 100 times that many—vastly more people than can be maintained without all the technology and organization implied by the word *establishment.*

The upshot of all of this is that we don't have much



"It's me—Moby Dick! I just came through the Santa Barbara Channel."

room to maneuver. We must change our value system at a nearly explosive speed yet without destructive violence. In a society where government is by consent of the people, massive education offers us the only hope of avoiding disaster.

To meet this challenge, environmental education must involve far more than plant and animal identification for grade school kids. The crucial task is to provide every man, woman, and child in the nation with a deep ecological awareness of how all the things in our environment are interrelated.

Now that most of us live in cities, we are far removed from such realities as photosynthesis, soils, and food production. Many city people grow up thinking of milk as something technology provides to us in cartons. To them it has no relation to cows, grass, soils, sunshine, and acres of land. Yet these are the citizens who vote on crucial environmental issues. Environmental education has become essential for responsible citizenship.

Let's look at the needed changes in attitudes. Perhaps the starting point is to recognize that the earth is finite—a limited sphere. Having accepted this idea, we must recognize that unlimited growth is neither possible nor desirable and seek an approximately stable relationship with our environment. This will call for recycling as much of our material wealth as possible instead of using it and then discarding it. Currently, instead of a circular flow in which things are used repeatedly, we have a one-way flow—from resources through various processors and factories to consumers to junkyards. This one-way flow is depleting our resources and gorging our junkyards.

As part of a revised value system, we need to accept a new outlook on social accounting so that such things as clean air, safe streets, open spaces, and diversity are prized along with next year's automobiles and gold-plated plumbing fixtures. Often we will have to pay higher prices that cover *all* the costs of production, including repair of any damage done to the environment.

Within our present institutional framework, we can do this simply by changing the rules (and, of course, enforcing them), so that profit is taken out of doing the wrong things and incentive provided for doing the right things. A tax or charge on pollution and other environmental damage would create incentives for producers to find cheaper alternatives than dumping things into the environment and paying the charge. Such procedures would immediately bring technology and ingenuity to bear on problems in great need of solution.

There are sound scientific principles that determine the limits within which human populations, their environments, and their technologies can remain viable.

Attaining widespread understanding of the relationships between people and the environment is going to require massive education, involving all of the mass media. Fortunately, this is already taking place. Scarcely a day goes by without news coverage or a new magazine article on environmental problems.

Something deeper seems to be needed, however. All segments of the public need information that helps them see the nature of the problem and that helps them develop attitudes appropriate to the world as it is today.

To ask for change in deep-seated attitudes is stern medicine, and most people won't take it unless it is sugarcoated. Therefore, we need to place much of the burden on television. We should have prime-time programs that are dramatic and enjoyable enough to hold noncaptive audiences of all ages. Such programs could undoubtedly capitalize on the drama and even terror of what can happen if we don't change our ways. And, as I have mentioned, the villains must include our own inappropriate attitudes, not just convenient scapegoats.

To supplement and complement the mass media, the schools must introduce the basic concepts of ecology in the early grades as is already done in some places. Similar coverage must continue right on through college. This will require some tooling up, for at present there is a dearth of teachers equipped to do this. We also need to ask some searching questions about the content and effectiveness of the programs that do exist.

Since most of us cling to our basic attitudes unless we are under great stress, perhaps we won't change until the stress gets much greater. But by then we may have lost many valuable options.

What I am suggesting is that we have two basic choices. We can limit our growth and other impacts on the environment voluntarily, in which case the limiting factor is an *attraction* consisting of a lifestyle that provides space, abundance, freedom of many kinds, and a broad variety of alternative opportunities. Or, we can continue to grow and pollute and congest until stopped by *hardships*—limiting factors that are not of our own choosing. Instead of attractions, these will be constraints and repulsions, such as limited food, space, and resources; intense pollution; epidemics; greatly restricted alternatives on where we live and what we do; or a social pathology that paralyzes most of our efforts. Technology might deal with some of the problems, but only by imposing its own set of restrictions and problems.

As a species, we will probably survive, even if we take no action, just as scattered and impoverished people survive on deserts that once supported rich agriculture and major civilizations. However, if Homo sapiens is truly a thinking being, we should seek much more than merely to survive environmental disaster. Attaining this "something more" is the challenge of environmental education. □

♦ *While the supply lasts, we are offering single copies, free upon request, of a bibliography on ecology. Write to* TODAY'S EDUCATION, *Section SP, 1201 Sixteenth Street, N.W., Washington, DC 20036.*

Ecology—Heart of Our University Program

The Environmental Sciences Building is on the main campus of the University of Wisconsin-Green Bay.

EDWARD W. WEIDNER, *chancellor, the University of Wisconsin-Green Bay.*

☐ **My article will describe how one institution of** higher education—the University of Wisconsin-Green Bay—is responding to the environmental crisis by giving an environmental focus to its whole curriculum. We believe that if such a focus is to have a real impact on a national basis, many other schools at all levels must turn in the same direction. We do not suggest that other schools can or should copy directly what we are doing, for what each school does should be related to its own community and region and to the human and physical resources available to it.

The University of Wisconsin-Green Bay is a new institution. It was three years in the planning—from 1966 until 1969. We occupied our new main campus and launched our academic plan in the fall of 1969. Superficially, UWGB may appear to be like any other institution. We train chemists, biologists, physicists, and mathematicians. We train business administration specialists, elementary and secondary school teachers, artists, musicians, and actors. A student may select a foreign language, English, philosophy, or history. And all of the social sciences can be found in our course list.

The fact that much is familiar at UWGB is an important point to emphasize in an era that tends to emphasize the innovative and experimental. Every person who is going to be a responsible citizen of any modern society must master basic intellectual skills. In addition, many of our citizens need to master certain specialized skills. The question of critical social importance to which the UWGB academic plan particularly addresses itself is how each individual chooses to use the skills that he acquires.

As never before, our country and the world need citizens who are committed and dedicated to improving the lot of mankind. At UWGB, we are seeking to inculcate in all of our students a lifelong attitude of concern for the environment, its preservation and its improvement.

Our aim is to relate every part of our program to the ecological crisis. Whether it is teaching, research, or community outreach, the focus of the university remains consistently that of helping student, professor, and community member to live in greater harmony with the environment and to *do* something constructive about the problems that beset it.

To carry out this mission, we must relate daily and directly to the people and to the other institutions

and agencies of our community and region. Our students and faculty members must interact with the people of their community in identifying, investigating, and seeking solutions to the problems of their common environment. Conversely, we want the people of the community to think of the campus as a place where they and their ideas are welcome and where they can obtain resources and guidance. We have devised the label *communiversity* to describe this close reciprocal relationship and are doing everything we can to make UWGB a true communiversity.

Two fundamental ideas, then, determine our institutional direction: a focus on man and his environment, and the concept of the communiversity. In order to implement these ideas, we are forging an educational program that in a number of ways is different.

First, a true reciprocal relationship is developing between UWGB and the northeast Wisconsin region. Students and professors study, observe, and work in the community as well as in university classrooms. In turn, members of the community come into the classroom and interact with faculty and students. The teaching approach emphasizes problem solving and decision making in the context of relevance to environmental problems.

Second, teaching, research, and community outreach merge into a single intellectual function, as they must if we are to deal effectively with the pollution of a river, the decay of a downtown urban area, or any of the dozens of other environmental problems found in our region.

More and more institutions of higher education in the United States are now offering new courses that deal with man and his environment—or they are revamping old courses in order to stress man's effect on the stability of all of nature's systems.

The following list of courses and institutions is representative but not inclusive:

Biology and Society—Cornell University
Ecology—Mercer County (New Jersey) Community College
The Social Responsibility of the Scientist—University of California, Berkeley
Population and Human Ecology—William Jewell College
The Final Crisis (a TV course)—University of Minnesota
Environmental Studies—Iowa State University
Man in His Environment—Antioch College
Values in Technological Society—Utah State University
Man and Environment—University of Texas
Population, The Vital Revolution—University of California, Irvine
Environmental Perception—Rutgers University
Contemporary Problems in Environmental Health—Purdue University
Biology and Human Affairs—Yale University
Man in Nature: Conflict and the Human Condition—Ohio Wesleyan University
Environmental Studies—Brandeis University
Man and His Environment—Cedar Crest College
Man, Nature, and Society—Tulane University
Urban Ecology—Pace College
Man and His Environment—University of Oregon
Life and Environment—Saint Cloud State College

On many campuses students are banding together in an effort to make a positive impact on environmental problems. At the University of Michigan, for example, a student-community group, Environmental Action for Survival (ENACT), have organized together for the purpose of making the public aware of the environmental crisis, of the consequences of alternative solutions to the problem, and of the need for interdisciplinary environmental education programs at all levels.

ENACT also plans to campaign actively for officeholders who support the environmental movement, to pressure for strict enforcement of existing laws, and/or lobby for the repeal of inadequate legislation and for the passage of effective laws.

Third, a focus on ecology and communiversity requires extensive and frequent contacts between faculty and students outside the classroom as well as inside. It means a joint search for solutions to some of man's most urgent problems.

Fourth, students must take considerable initiative for their own learning. They must become skilled at sorting out their values clearly, identifying the major problems, and then getting enough information to develop programs of cooperative action to solve the problems.

Fifth, the primary focus of the curriculum is on environmental problems, rather than on individual disciplines and professional fields. UWGB recognizes and teaches the disciplines, but curriculum control is centered at an interdisciplinary level. Broadly defined environmental problems provide the focal points both for faculty organization and budgetary planning.

The UWGB student selects one of these environmental problem areas as the center of his intellectual interests. It may be a problem of the biophysical environment, such as environmental control in regard to air, water, land, natural resources, or environmental engineering. It may be a problem associated with social process, such as urban decay or regional planning. It may be one involving population dynamics, the ratio of available food to population, or the effect of environment on human development. It may deal with the matter of human identity and the many diverse aspects of human communication and action. If none of the formally defined problems satisfy the student, he may select an environmental problem of his own devising.

The environmental problem that the student chooses then becomes the central point of relevance for his program. He picks courses in the various disciplines and professional fields that contribute to thinking, problem solving, and decision making in connection with the particular environmental problem. Thus chemistry, art, secondary school teaching, psychology, or whatever subjects or activities make up his course program have new and exciting meaning for the student. They are means to a social end; they relate to one another, as well as to the environmental problem. The student learns to see the world outside the university as being fully as relevant to his learning objectives as the world of books, lectures, and discussions inside the university.

We think of UWGB as a new institution for a new age—the age of the environment. But a single institution, by itself, can have only very limited impact on the enormous problems that characterize this new age. Fortunately, during the past year, concern for the environment has become a popular theme throughout American society. Last spring Earth Day captured the attention and the energies of millions of students at all levels of the educational system and also involved many adult citizens.

Many colleges and universities have added courses, institutes, centers, and seminars dealing with one or more aspects of the environmental crisis. The Con-

gress and many state legislatures are beginning to piece together a new body of environmental law. Industry and government have begun to face up to the implications of their activities that pollute the environment.

This is all to the good, but it is only a first step. If we are to deal effectively over the long run with environmental problems, we must devise a coordinated network of institutional approaches. In many instances, of course, this will involve changing the orientation of existing institutions. Such changes are never easy and will require corresponding changes in the attitudes and goals of the people who make the institutions work.

The logical place to begin is in the educational system, particularly at the early levels where goal perception and attitude formation begin. We at UWGB are well aware of the need for developing a comprehensive plan for environmental education, starting at the preschool level and continuing through the elementary and secondary grades and on into all of the educational institutions above the secondary level.

Some time ago the Johnson Foundation of Racine, Wisconsin, became independently aware of this need. Recently UWGB and the Foundation agreed to pool some of their resources to begin practical study and field work for development of an environmental education curriculum for the K-12 grades. A three-year grant by the Foundation will cover a large portion of the salary of the full-time director of this project. We will need—and can get—substantial additional funding outside the regular university budget to carry out the project.

It is still too early to describe the project in any detail, but the current intention is to involve a number of public and private elementary and secondary schools in Wisconsin in the planning, preparation, and evaluation of curriculum materials. There will probably be teacher workshops, and certainly there will be an increasing interchange of ideas on this vitally important subject between the university and the school systems of the area.

With the support of a grant from the National Audubon Society, and in cooperation with the U.S. Office of Education and the Wisconsin Department of Public Instruction, UWGB is holding a national conference on environmental education on December 3-5. We expect this conference to generate guidelines and goals that can apply to our long-range environmental education project.

As one who has been intensively involved in the creation, staffing, and operation of a university that has man's environment as its single, strong focus, I am probably prejudiced. Nonetheless, let me express my profound conviction that every educator should be asking himself what he can do personally and professionally to help reverse the massive trend toward environmental degradation, a trend that threatens the entire life-support system of our planet. □

□ **I define as most seriously overpopulated that nation** whose people by virtue of their numbers and activities are most rapidly decreasing the ability of the land to support human life. With our large population, our affluence, and our technological monstrosities, the United States wins first place by a substantial margin.

Let's compare the U.S. to India, for example. We have 203 million people, whereas she has 540 million on much less land. But look at the impact of people on the land.

The average Indian eats his daily few cups of rice . . . draws his bucket of water from the communal well, and sleeps in a mud hut. In his daily rounds to gather cow dung to burn to cook his rice and warm his feet, his footsteps, along with those of millions of his countrymen, help bring about a slow deterioration of the ability of the land to support people. His contribution to the destruction of the land is minimal.

An American, on the other hand, can be expected to destroy a piece of land on which he builds a home, garage, and driveway. He will contribute his share to the 142 million tons of smoke and fumes, 7 million junked cars, 20 million tons of paper, 48 billion cans, and 26 billion bottles the overburdened environment must absorb each year. To run his airconditioner, we will strip-mine a Kentucky hillside, push the dirt and slate down into the stream, and burn coal in a power generator, whose smokestack contributes to a plume of smoke massive enough to cause cloud seeding and premature precipitation from Gulf winds which should be irrigating the wheat farms of Minnesota.

In his lifetime he will personally pollute 3 million gallons of water, and industry and agriculture will use 10 times this much water in his behalf. To provide these needs, the U.S. Army Corps of Engineers will build dams and flood farmland. He will also use 21,000 gallons of . . . gasoline, . . . drink 28,000 pounds of milk, and eat 10,000 pounds of meat. The latter is produced and squandered in a life pattern unknown to Asians. . . . After being eaten by man, these nutrients are flushed down the toilet into the ocean. . . . The average Indian citizen, whose fecal material goes back to the land, has but a minute fraction of the destructive effect on the land that the affluent American does.

. . . India will be here after the United States is gone. Many millions will die in the most colossal famines India has ever known, but the land will survive and she will come back as she always has before. The United States, on the other hand, will be a desolate tangle of concrete and ticky-tacky, of strip-mined moonscape and silt-choked reservoirs. The land and water will be so contaminated with pesticides, herbicides, mercury fungicides, lead, boron, nickel, arsenic, and hundreds of other toxic substances, which have been approaching critical levels of concentration in our environment as a result of our numbers and affluence, that it may be unable to sustain human life.

Thus as the curtain gets ready to fall on man's civilization let it come as no surprise that it shall first fall on the United States. . . .

—Wayne H. Davis, *School of Biological Sciences, University of Kentucky; writing in the January 10, 1970, issue of* The New Republic. *Reprinted by Permission of THE NEW REPUBLIC, © 1970, Harrison-Blaine of New Jersey, Inc.*

What Secondary Schools Are Doing

□ **Pollution stands in danger of replacing the weather** as a subject that elicits more talk than action.

But this is not true of a band of dedicated junior high students in San Bernardino, California, who work with the officially chartered Natural Beauty Program. These youngsters have added old-fashioned labor to their voices of protest about damage to the ecology.

Since 1958, successive members of the Conservation Club of Richardson Junior High, from which the Natural Beauty Program evolved, have collected tons of debris, planted scores of trees, and sponsored numerous activities that point up pollution problems to their elders as well as to their contemporaries.

In the fall of 1959, a committee of students from the Club visited the blackened hillsides that lay in the wake of a summer forest and brush fire that swept to the outskirts of the city. The loss of watershed, the potential for flooding, and the damage to the natural beauty of the area distressed the young people, and they decided to do something about it.

Working in cooperation with the U.S. Forest Service, the Club labored to repair the stricken area by planting more than 2,000 Jeffrey and Ponderosa pine seedlings; clearing stream beds; and building ponds, terraces, and check dams (constructed of the charred remains of trees), which prevent erosion from steep mountain terrain.

The project only whetted their appetites. The students became aware of the problems of pollution and blight. As disturbing to them as the actual problems was the public apathy that allowed these problems to exist.

The students began in-depth studies. In addition to visiting mountain, desert, and urban locations to see various problems, they went to sewage disposal and water reclamation plants, air-pollution-control and experiment stations, and similar installations.

Even while in transit to and from the points of interest in conservation studies, students saw defiling of the natural beauty of the area. Litter along the roadway worried them, and they classed it with air, water, and noise pollution—but with a difference: Here was a problem where they could take direct action. As students moved on in school and left the program, others came up to take their places, but not all of them left the program. Those who remain in the program as high school students form the program's board of directors.

In 1965, the daily press took note of a full-scale antilitter drive spearheaded by the Club, which had enlisted students from other schools and youth groups to their cause. It was then that the Club determined to organize the Natural Beauty Program of San Bernardino in order to recruit manpower to deal with environmental problems of the city and the area surrounding it.

By last year, the program had grown to encompass 2,500 young people from 22 different schools in the city school system along with members of the Boy Scouts, Girl Scouts, Camp Fire Girls, and others.

There were 36 separate antilitter drives last year, many of them school-neighborhood cleanups organized with the assistance of the Natural Beauty Program. Secondary school students and organized youth groups devoted a dozen Saturdays to these antilitter drives.

The program has a goal for the current school year of about 4,000 participants from the city schools, plus additional hundreds from the area's organized youth groups. Early fall fires in Southern California have created a real need for even greater dedication by the program's youngsters.

In another cooperative project with the U.S. Forest Service, the young people went to work to clean up the remains of an abandoned rubbish dump that had turned a canyon into an eyesore and threatened to pollute the underground water. During the year, 300 different youngsters contributed more than 800 man-hours of volunteer labor to reclamation of the old dumping grounds. They planted 650 trees and moved dirt and rock by hand to establish a parking lot in a strategic area for a scenic overlook.

Teachers and administrators close to the Program feel it helps to establish a stronger tie between teacher and student in addition to involving large numbers of youngsters in constructive citizenship. As one teacher put it: "When teachers put on their old clothes to help students clean the neighborhood of trash or kneel beside a boy or girl to plant a seedling, students find out their teachers are human."

—Gerald W. Stoops, *science teacher, Richardson Junior High School, San Bernardino, California.*

□ **Survival in the urban environment has become a** major theme in my life-science program for students. Being located in the greater Detroit area gives students unlimited opportunity to conduct studies on environmental pollution. In the most successful studies, stu-

dents carry on field investigations in the urban area that are ecological studies, *not* mere tours.

Student research teams generally divide into four groups, each responsible for conducting some aspect of the field investigation. Some students take photographs and movies of the area under study. At a later time, they use these visual records to determine if environmental-improvement programs are making any progress.

Other students record environmental data—for example, the climate, the nature of the topography, or the source of the pollution (steel plants, chemical plants, and the like). Still other students collect air, water, and soil samples. They also collect small animal and plant specimens, such as insects and weeds. And they record the general biological community in the area; noting and, if possible, identifying larger animals (birds, squirrels, rats) and plants.

From these field investigations, the biology students develop an ecological profile of the plant and animal communities that survive in a severely polluted urban environment. They correlate biogeographical data with specific sources of industrial pollution, and very interesting ecological maps of Detroit have resulted. Many biology students are conducting controlled experiments with the air, water, and soil samples collected during the field investigations. Some, for example, are growing plants in contaminated air and watering them with different industrial river samples. Some are making detailed ecological studies of aquatic and soil populations from samples collected in various regions of Detroit.

Recently, my biology students have undertaken several projects to study human ecology in the city and surrounding suburban areas. To them, the survival of human beings in a congested urban environment characterized by severe pollution has become a most pressing topic for discussion. Unfortunately, the more they discuss the topic, the more they become pessimistic about the future.

—Ronald Saltinski, *science instructor, grades 9 through 12, Robichaud High School, Dearborn Heights, Michigan.*

□ **The scientific demonstrations were dismantled, the** free pamphlets were gone, the guests and speakers had departed, and yet the most important products of the April Environmental Symposium at Amity Regional High School—the newly acquired knowledge, the energy, and the commitment to redress the environmental balance—were there, ready to be guided. The aim of the symposium had been to increase awareness of the environmental crisis. The 1,000 participants had heard experts on all aspects of the problem; they had seen movies and scientific demonstrations.

Environmental happenings did not end with the symposium, however. The after-school Zero Population Growth environmental slide show provided an exciting assembly. The symposium awoke curiosity and concern and consequently triggered a number of activities that altered the spectator-sport image of the teach-in. Collecting litter around the high school as well as in the community and taking a bicycle inspection tour of New Haven began a list of student activities carried on after school.

During spring vacation a number of students and a teacher testified in an open hearing before Connecticut's Clean Air Commission, and a number of Amity students joined with high school and college students in the area participating in Earth Day events in New Haven.

Probably the most exciting and meaningful activity was the series of highly publicized mini teach-ins that 20 senior high students presented at the two junior high schools and several elementary schools in the community. With some additional research and some suggestions on creative presentation, the students took to the teaching field to transmit their new knowledge to eager ears. As one of the "student teachers" put it, "When the day was finished, I felt students had at least been exposed to and had grasped an understanding of the environmental problem. I am sure there was no monumental change in anyone's life, but if the teach-in challenged peoples' minds, then it was successful."

The symposium program has also influenced the Amity classroom in two important ways. First, it has given the classroom teacher the impetus to integrate various aspects of environmental problems into the curriculum. Second, it has resulted in an increased number of special research projects of a scientific as well as a socioeconomic nature. In general, each individual involved has a new awareness of his impact on environment.

This year a new student activity began: the Environmental Action Club. The Club's principal project is a program of recycling glass and metal. Members hope to educate residents of the community to separate waste that can be recycled from waste that can't. Money raised from the program will be used to develop an ongoing environmental education program, including future teach-ins, for students and community.

—Joseph Proffitt, *chairman, History Department;* Susanne Duffy, *history teacher;* James R. Bouchard, *biology teacher; and* Lawrence Schaefer, *chemistry teacher. Amity Regional Senior High School, Woodbridge, Connecticut.*

□ **"A mourn-in for a marsh?" everyone asked in the** early spring of 1969. Snow was still on the ground, and few people even knew what the word *ecology* meant, but the Thomas School's biology teacher, Joy Lee, was aware and determined to arouse her students and school to the crisis in their own backyard.

Located as it is on the shore of Long Island Sound, the Thomas School, a private girls' school, had long made use of the local marshes for biology field study. Aroused at the wanton filling and pollution of the local marshes by people who were unaware of the

damage they were doing to the ecology of the area, Mrs. Lee discussed the situation with her students, who decided to do something about it.

Mrs. Lee asked my permission to start a public information campaign aimed at stopping the destruction of the marshes. Her plan was to begin school with an early morning breakfast for local politicians, state legislators, and conservationists. From there, the students would march to the local marshes wearing black armbands and carrying placards proclaiming a "mourn-in" for the dying marsh. I endorsed the proposal enthusiastically, and the movement was under way.

After the breakfast and the mourn-in, which received excellent newspaper coverage, the next steps came naturally. Thomas students set up an organization called PYE (Protect Your Environment). The students and their art director designed an emblem with blue and green triangles on a yellow disk to stand for clean air and water, green spaces and sunlight—elements necessary for the sustenance of life on earth. They made the new emblem available to the public as buttons and auto decals, which began to appear all over southern Connecticut, and eventually spread to other schools. Recently it appeared on the cover of *Scholastic Magazine*. [It also appears in this special feature, page 15.]

When PYE learned that a wetlands bill had long been bottled up in the Connecticut legislature, Mrs. Lee and her girls went to work. They prepared literature on the bill, went to the commuter stops at 6:00 A.M. and 7:00 P.M. to arouse voter interest, and bombarded the members of the legislature with letters, information, and PYE buttons. PYE girls went to Hartford with Mrs. Lee to appear at legislative committee hearings and they collared legislators in the halls of the state capitol. New York City's Channel 2 came to Thomas to do a two-minute spot for their evening news report and ended up giving 11 minutes of coverage to the PYE Club endeavors.

As a result of PYE's efforts, Connecticut Senate Bill 419 was reported out and was passed unanimously by the House and by voice vote in the Senate. On July 1, 1969, Governor Dempsey signed it into law. The most noteworthy provision of the bill is a moratorium on use of tidal areas until a survey can be made to determine what areas should be retained for the public domain and what areas can be made available for private use.

Since that time, PYE has become a nationally recognized movement of secondary school students and has helped more than 60 other schools from coast to coast establish their own PYE clubs. More than 90,000 PYE buttons and decals have been sold or distributed to schools, colleges, and interested adults.

PYE puts its weight behind members of Congress who are willing to work for legislation to save the environment. Plans are being laid to coordinate the efforts of the many PYE clubs to distribute information on voting records of various Congressmen, and to keep the ecological issue before the public and the politicians.

Last spring, PYE members went to Washington for conferences with a number of Congressmen and with Secretary of the Interior Hickel. Secretary Hickel and the Congressmen the PYE girls visited were friendly and receptive.

Of immediate interest to the PYE clubs of Connecticut is Senator Ribicoff's proposal concerning a tristate plan to clean up Long Island Sound. PYE clubs can help this kind of proposal through taking part in public-information programs.

Like all groups concerned with the growing environmental problem, PYE knows that the task ahead is seemingly insurmountable. Nevertheless, because of the public's growing awareness of the need to save such areas as the Rowayton Marshes, it is not dismayed by the gigantic cleanup that remains to be done.

—Arthur Harper, *headmaster, the Thomas School, Rowayton, Connecticut.*

Interested readers may obtain *How Can Our Physical Environment Best Be Controlled and Developed?* (Senate Document No. 91-66. Price $1) by writing to the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

The 231-page volume contains a collection of excerpts and a bibliography relating to the 1970-71 high school debate topic, whose three debate propositions are:

Resolved, That the federal government should establish, finance, and administer programs to control air and water pollution in the United States.

Resolved, That the federal government should establish economic penalties to control the pollution of our physical environment.

Resolved, That the federal government should control the use of all chemicals which pollute our physical environment.

We must . . . realize that we are going to have to rethink our standards of luxury and necessity. For instance, our use of electricity ought to be reconsidered.

The utilities fill our needs for electricity. We cannot, on the one hand, condemn utilities for making efforts to provide us with electricity, and then turn around and fill our houses with endless electrical gadgets. We demand from the utilities that they always supply us with enough electricity to run our electric toothbrushes, our electric knives, our electric blankets, our electric can openers, and all the other modern conveniences of our society. But we never stop to consider that because of our excessive electrical demands, the utilities must keep building and operating polluting power plants. The first step to help clean up pollution caused by overworked power companies is to reduce electrical demands that every home makes, and we should begin to seriously consider this fact now.

—Charles H. Percy, *U.S. Senator from Illinois.*

What Elementary Schools Are Doing

□ **Last winter the sixth graders in Templeton Elementary** School really grabbed hold of our science unit on land, air, and water pollution. In it we studied the causes, effects, and possible future solutions. We learned about pollution in our own community through a study done by a local environmental control agency.

Children started bringing in newspaper and magazine articles to report on, read, and discuss. Bulletin board displays flourished.

The facts we gathered about pollution alarmed the children. But it was in a language class that a group of them got excited about doing something themselves to tackle the problem. They decided to begin by educating the rest of the student body.

For the next few weeks, the children, working in interest groups, created puppet shows, skits, stories, slide presentations, picture and chalkboard demonstrations, and talks to give to the primary grades.

The kids didn't want to stop with this project and sought another more sophisticated one—an assembly on pollution to educate the intermediate grades. At this point, enthusiasm about the whole project caught on with all the sixth graders, and so the projects were easily carried out in science classes again. Each class selected various media to illustrate the problem and solutions. At intervals throughout the assembly, students from one class gave short speeches that presented interesting and startling information about pollution. We gave this same program later on for our Parent Teacher Association.

During this time, volunteer groups of youngsters had been spending recesses picking up litter around our school grounds. The children initiated and carried out a final project entirely on their own. One Saturday a group of more than 20 drove around town in an old firetruck (obtained by the fireman father of one of the group) and picked up enough litter to fill more than 13 huge bags.

All these projects succeeded because our pupils were sufficiently concerned to do something about pollution above and beyond any school requirements.

—Nell Cretsinger, *former sixth grade teacher, James Templeton Elementary School, Tigard, Oregon.*

□ **Since 1966, the Elyria, Ohio, City Schools have** given considerable attention to the pollution problem and to expanding the curriculum to include a broader involvement with environmental education.

Last spring, 625 students in grades 3-6 from six Elyria elementary schools participated at a wooded campsite in a series of outdoor education studies that stressed nature sciences and art.

A second continuing program is built around the broad topic "Man, Art, and the Environment." Art teachers at all levels participate sometime during the year in planning with each art class a study unit derived from this topic.

Some activities have been limited to visual-descriptive interpretations of the environment, with paintings, posters, and graphic prints predominating. Some have pursued in-depth color studies based on pollution-caused environment changes, even reaching out to the long-range effects on adaptive, protective coloration in birds and insects.

Other activities have involved designing idealized two- and three-dimensional plans for better living spaces to accommodate man's city life without despoiling the environment.

As a result of cooperative planning, we have discovered that a close and natural working relationship can exist between the areas of art, social studies, and science and that this relationship needs to be capitalized on to coordinate studies involving man and his environment.

—Charles R. Rose, *supervisor of art education, Elyria, Ohio, City Schools.*

□ **"Gee, you can really tell the difference in the air** now, can't you?" "Look at the exhaust from the car; bet the driver hasn't had his air pollution mechanisms checked." A group of elementary school students voiced comments such as these as they returned home after a three-day, camping-field trip that climaxed an experimental project in air-pollution-control education in the summer of 1969.

The project, which was carried on at the Institute of Child Studies at Newark State College, proved conclusively that elementary school students can become interested in and concerned about the control of air pollution.

Helped by a grant from the Kirby Foundation, the School of the Outdoors Foundation operated the project through the Institute, with College cooperation.

Every morning at 8:30, the "research team" (students who had just completed sixth grade) gathered at the "classroom" (a converted storage-workroom) for the day's explorations. With the exception of one

half-hour swimming period and a long lunch-recreation period, we spent the day developing a resource unit that would enable students in middle school classes to learn about air-pollution control.

These were the project's guiding principles:

1. Since air pollution is an environmental problem, the outdoor education method should be a major part of the strategy.

2. Students should be involved in every phase of the project.

3. It should be a "doing" project, not just a listening or reading project.

4. Behavioral or instructional objectives offer a built-in means of partial evaluation.

5. A multidimensional strategy offers many opportunities for reinforcement.

6. A structure starting with basic concepts provides a logical basis for a program.

7. Inquiry and discovery should replace "cookbook" experimentation.

We started with concepts about air and its properties; moved on to weather and climate; and then into the next steps of correlating the effects of air pollution. Much of the learning experiences came about by *doing*. We had a homemade weather station and soon were making daily weather reports and forecasts. Before we finished, we added a pollution station. By this time, we had made devices for measuring some of the simpler pollution components. We measured particulate fallout in several places; practiced methods of making pollen counts; and, whenever possible, observed and studied the effect of the sun in producing other pollutants and in producing convection currents and winds.

In the "laboratory," we made and tried out various devices. For example, in "mini-greenhouses" made of flowerpots and plastic bags, we subjected growing plants to car exhaust fumes and obtained some dramatic results. All devices were made of readily available materials, in an ordinary workroom, and with tools and equipment anyone could get. Our basic supplies were tin cans, bottles, balloons, milk containers, wood from boxes, and an old vacuum cleaner, supplemented by aquarium tubing and a little laboratory glassware. One exception to the readily available category was a set of "detector tubes" for mine safety work, which we purchased. We developed an inexpensive pumping device. Since we were more concerned with awareness than with scientific measurements, the simple devices were adequate.

We did much work outdoors and took frequent field trips. We tested air at the seashore, on the highest mountain in the state, in a remote rural area, and in a city, as well as in our own suburban area. We visited pollution research centers to see what the professionals were doing. A three-day trip that climaxed our project gave us the opportunity to enjoy an unpolluted area and also provided a basis for contrast with polluted areas.

One set of experiments concerned the effect of air pollution on the human being. We made visibility tests, compared odors, and estimated lung capacity under different circumstances with a simple spirometer. The effect of air pollution on nerves and pulse rate and endurance as shown by simple activities fascinated the students.

Since one of our objectives was to present a multidimensional strategy, we also used films, filmstrips, discussion, occasional lectures, demonstrations, and all the reading matter we could find on the subject. At one point, our students taught lessons to a visiting group of retarded students with excellent results for both groups.

After the pilot project ended, an advisory committee of scientists and educators checked all the material thoroughly and put it in the form of a resource unit that others could try. Nine classes in the middle grades of five school systems throughout the state tried out the program during the 1970 spring semester and provided very favorable feedback. The mid-Atlantic section of the Air Pollution Control Association is now considering the possibility of printing the unit and making it available for general use, free of cost, early in 1971.

We feel that this unit has much merit. We are sure that *every* school must include in *every* course of study information about air pollution and other environmental factors if the general public is to sustain the long-term effort needed to maintain a viable environment for man.

—Benton Cummings, *assistant professor of outdoor education, Newark State College, Union, New Jersey. Mr. Cummings taught biology and earth sciences at Newton (New Jersey) High School.*

Pesticides, in general, are *designed* to fail. The industry profits by this because when they do fail, their recommendation is to use *more* pesticides. The industry also cleverly recommends spraying on a regular schedule whether the bugs are there or not—a sort of "preventive" approach that actually has the opposite effect. By spraying, as they recommend, late in the winter and then every two weeks in the season, you guarantee that the pests you are after will develop resistance. Beyond this, pesticides don't work because they almost always kill off far more of the predators that eat the plant pests than the pests themselves. The reason for this is simple: the pests, over a period of millions of years, have evolved means of handling poisons that the plants themselves produce as defenses. The pests are adept at this, but the predators aren't. And when the spray kills off the predators, the pest population explodes. The scientific approach to pest control is to enhance the plants' natural defenses, not introduce substances that dangerously upset the ecological balance.

—Paul R. Ehrlich, *professor of biology, Stanford University, speaking in an interview with* Look *magazine, April 21, 1970. Reprinted with the permission of Paul R. Ehrlich and the editors of* Look *magazine.*

□ **Two years ago—before the high pitch of concern** over the "pollution crisis"—the small coastal community of Yarmouth, Maine, embarked on an exciting environmental education program for its 1,200 youngsters in grades K-12. The pilot program, entirely community-financed, was spearheaded by an energetic superintendent, a concerned and far-thinking school committee, and an industrial arts-science teacher, who served as coordinator after receiving special training during a year's leave of absence. The appeal of this first-year effort was contagious, and the second year found three neighboring school systems sharing the program.

The program focuses on the natural and man-made elements of the community—particularly its environmental problems and the role of citizens in helping to solve them. During the school year, as many as 50 citizen volunteers assist the coordinator and classroom teachers on outdoor field trips. This makes it possible to divide classes into small groups, enabling the leaders to reach each student as he explores the environment of his school (grades K-1), the neighborhood (grades 2-3), the community (grades 4-5), and the region (grade 6).

On the field trip, students get a firsthand look at the natural components of the study environment and at their interrelationships—land, water, air, plants, animals, and energy and its effects. But the exciting aspect of the program is that it encourages youngsters to investigate how we use these basic resources in our urban environment (through land and water development, structural design, transportation, utilities, and recreation) and what environmental controls are needed to protect them. These themes are focal points for basic science and social studies concepts that students acquire through classroom presentations, field trips, and follow-up environmental improvement activities at all grade levels. The program is, therefore, interwoven throughout the curriculum in the school system.

Since the success of environmental education depends on going out beyond classroom walls, school site development is another major responsibility of the coordinator. Now well under way in Yarmouth is a model school site being developed for use as a teaching resource for environmental learning, a place where students can carry out environmental improvement or conservation activities, and a community outdoor recreational or nature center.

Still another area of work for the coordinator involves curriculum enrichment through special workshops, field trips, newsletters, book lists, and so on.

Today, the program is shared by four other communities—Falmouth, Freeport, Cumberland, and North Yarmouth—reaching over 6,000 students. What of the future? At least four more school districts in Maine have now agreed to establish and finance such model programs in their schools. In preparation for these programs (under a Title III ESEA grant), four teachers from these latter school districts are now receiving a year of specialized training at the University of Michigan. How the state agency and university system of Maine can meet the needs of other schools is being explored.

And so a state that still has opportunities to protect its precious natural resources and plan their development is well on its way with a program that will support a statewide environmental policy.

—Dean B. Bennett, *director, Maine Environmental Education Project, Title III ESEA, and doctoral student in environmental education, University of Michigan. Mr. Bennett has taught at the elementary, secondary, and college levels.*

Tips for Ecology-Conscious Consumers

Synthetic Detergents. If you must use them rather than soap powder and washing soda, select those that are low in phosphate, which causes water pollution. Use as little dishwater detergent as possible.

Polyvinyl Chloride (PVC) Containers. The director of HEW's Bureau of Solid Waste Management says, "When packaging containers manufactured of PVC are burned, corrosive gases are formed capable of severely damaging air-cleaning devices in incinerators." In addition, he says that if excessive quantities of the gases are emitted from incinerators, they may damage plants, trees, and shrubbery, as well as buildings.

PVC is a serious pollutant, so avoid products in clear, nonrigid glass-like containers. Some products frequently packaged in PVC are shampoos, hand lotions, mouthwashes, cooking oils, and hair tonics.

Buy these products only in glass containers and write companies protesting the use of PVC.

Returnable Bottles. Our nation is facing a garbage-and-litter crisis. No-deposit-no-return containers are among the worst offenders. Returnable bottles are still our best buy; they are cheaper and can be reused.

So, if you use soft drinks and beer, buy them in returnable bottles. Ask your dairy company to use returnable bottles. Write to companies (e.g. Reynolds and Kaiser Aluminum) commending recycling projects.

Overpackaging. The consumer pays twice for overpackaging: in the cost of the product and in trash disposal. The Bureau of Solid Waste Management statistics show that 45 to 55 percent of municipal solid waste is paper and cardboard.

So, buy simply packaged items, not items in multiple containers or wrapped in several layers of paper.

Pesticides. Unwise use of pesticides can destroy our environment and threaten man's health. The Rachel Carson Trust for the Living Environment recommends that you use pesticides only when absolutely necessary.

Never use: dieldrin, endrin, aldrin, toxaphene, heptachlor, DDT, chlordane, lindane, the mercurials, or lead arsenate.

In combating pests, we suggest specific, careful use (read fine print on label) of the following:

1. "Dri-Die," "Drione," diatomaceous earth for household insects.
2. Pyrethrum, rotenone (poisonous to fish), ryania, sabadilla (poisonous to bees), for household and garden insects.
3. Bordeaux mixture (hydrated lime and copper-sulphate), copper-lime mixtures, sulphur, and sulphur-lime mixtures for fungi, rusts, rots, viruses, and some insects.
4. "Warfarin" (keep secure from other animals) for rats.

Never pour pesticides down drains or into streams or lakes.

—Adapted from "Eco-Tips," the consumer guide of Concern, Inc., 2100 M Street, N.W., Washington, DC 20037. Multiple copies are available for $5 per hundred.

A Survey of School Environmental Programs

□ **In 1969-70, the NEA Research Division conducted a** pilot study to find out what is being done at present to teach pupils in public schools about their environment. It did so under a contract funded by the National Park Service and administered by the American Association for Health, Physical Education, and Recreation (an NEA national affiliate) as part of Project Man's Environment, an environmental awareness effort undertaken by AAHPER. This study was the first attempt ever made to survey environmental education programs on a nationwide basis. It was designed as a survey of programs in environmental, outdoor, and conservation education in operation in public schools in 1969-70 and covered all grade levels from prekindergarten through adult education.

Because of the impracticality of covering all school systems in the country, the survey included only systems that enrolled 1,000 or more pupils; however, these school systems enroll 90 percent of all public school pupils in the United States.

To concentrate on reasonably extensive programs in environmental education, the survey was further limited to those systems that had the equivalent of at least a half-time staff person assigned to an environmental program. A return-postcard sent to superintendents of all school systems with enrollments of 1,000 or more identified systems with programs of this type. Those having such programs received a lengthy questionnaire asking them about various aspects of their programs. More than 700 systems (90 percent of those surveyed) returned completed questionnaires. The results of the survey apply to the environmental programs in operation in these 700 school systems.

The survey revealed considerable diversity in environmental education programs. Following are some of the major findings relating to programs in the survey as a whole:

- A majority of environmental education programs are entitled "Outdoor Education" and are intended either to give pupils a general acquaintance with the outdoors and nature or to provide them with a general awareness of man in relation to his environment.
- Programs are aimed chiefly at pupils in the upper elementary grades.
- A majority of programs operate either year-round or throughout the entire school year, but in most instances scheduling is limited to the regular school week.
- The administration of most programs is centralized within the school system, but a considerable number of programs are administered on a decentralized basis.
- The great majority of programs combine classroom study with visits to sites outside the classroom. Almost all of these provide students with special preparation for their visits to sites and conduct follow-up activities afterwards. Discussions and reading in class, audiovisual presentations, and visits to the classroom by resource persons are all widely used as prior preparation for on-site experience. The most widely used types of follow-up activities involve oral reports and discussions; the examination, identification, and use of specimens gathered at the site; displays and exhibits; and written reports or essays. Films, slides, and transparencies, further reading, and art activities are also often used in follow-up of on-site experience.
- The areas of study included in the greatest number of programs are conservation, ecology, biology, insect study, geology, botany, general science, and weather study.
- More than half of all programs make use of curriculum resources available from the National Park Service. The most widely used types of NPS resources are media resources, such as films or pamphlets, or resources available at sites, such as visitor centers, nature trails, historic walks, or interpretive programs.
- The curriculum of programs is most often determined by an instructional team. In many cases, the teacher prepares field lessons for each trip, and student interests also influence curriculum planning.
- Most programs attempt to determine whether students' attitudes toward their environment have changed.
- Most programs that include students at the secondary level grant academic credit for work done in the program, but relatively few programs give grades.
- In a majority of programs, students visit places where they stay overnight. Most of these sites have cabins or bunkhouses, cooking and dining facilities, and an infirmary. The educational-recreational facilities most often found at such sites are indoor meeting rooms or classrooms, a display and exhibit center, a swimming area, and a crafts shop.
- Sites typically include forest or woodland, ponds or lakes, a recreation area, campgrounds, or a wildlife natural area.
- For a site that is used for day trips, 50 miles from

the school district appears to be the maximum feasible distance; for overnight sites, 100 miles. Few school systems, however, actually impose restrictions on the distance students may travel to environmental study areas.

- Most programs use the services of regular school staff—classroom teachers and principals—with the assistance of a resource person. Part-time staffing of programs is more common than full-time staffing.
- The great majority of persons in charge of environmental education programs are academically well-qualified as educators, holding a master's degree or higher, but few of them have had preservice training specifically in an area of environmental studies. However, most school systems with environmental programs provide in-service training opportunities for their staffs.
- Local sources of funds—chiefly, local boards of education—are of prime importance in financing environmental education programs.
- In addition to a basic need for increased financial support, a majority of programs in the survey acknowledge a need for assistance with instructional materials and in-service training guidelines in order to develop further.

The survey also discovered three different types of environmental education programs related to the grade level of the students participating in them.

Some school systems, either because they are elementary systems or because of the design of their environmental programs, provide environmental education only to students at the elementary level. On the other hand, some systems offer environmental programs only in one or more of the junior or senior high grades. Still others offer environmental education at both elementary and secondary levels. The largest proportion of the programs included in this survey were of the combined type, including both elementary and secondary levels, but almost as many were restricted to the elementary grades, while only a small proportion were restricted to the junior-senior high grades.

These three types of programs are quite different from one another. Programs restricted to the elementary grades are usually one-year programs aimed at grade 6. They operate chiefly within the regular school week and often during only one season of the school year (fall or winter or spring). They are designed primarily to give pupils an appreciation of nature and an opportunity to enjoy the outdoors, and a large proportion of them are, in effect, camp programs in which student experiences are limited to a period of residence at a site.

On the other hand, programs restricted to the junior-senior high grades operate chiefly within the framework of the traditional academic curriculum. Most of them are two- or three-year programs, directed at the senior high grades, and the largest proportion operate through out the school year. They focus primarily on the technical and scientific aspects of environmental study. The largest proportion limit their activities to classroom work with selected field trips. Their students spend a greater amount of time in the classroom than do students in the other types of programs and usually receive both grades and academic credit for the work

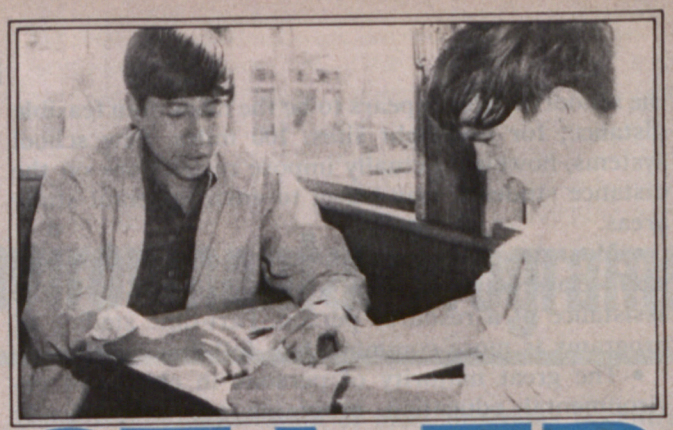
Programs that include both elementary and secondary levels are more comprehensive than either of the other types. More than half include six or more elementary grades, and a large proportion include a similar number of secondary grades. Primarily middle grade programs, the great majority are directed at grades 4 through 8. They attempt a total approach to the study of man and his environment, covering many different aspects of the field. A large proportion of them operate year-round. Collectively, they include a wider range of areas of study, use a greater variety of sites, and employ more staff persons than do programs restricted to either the elementary or junior-senior high level.

This is only a preliminary survey of environmental education programs throughout the country. Much remains to be learned about efforts to increase environmental awareness through public education.

—NEA Research Division.

♦ For more detailed information, see *Environmental Education in the Public Schools: A Pilot Survey*, a special report prepared by the NEA Research Division for the National Park Service, U.S. Department of Interior, and funded through the American Association for Health, Physical Education, and Recreation (NEA), 1970. 72 pp. $1.50. Order from NEA Publications-Sales Section. Stock No. 435-25450

"Grandpa, what was fresh air like?"



SEA ED

CARROLL G. FADER, *director, vocational education; project director, Sea Ed, Ketchikan Gateway Borough School District, Ketchikan, Alaska.*

□ **Mountains that climb straight up for 3,700 feet are** the backdrop of Ketchikan, a town one block wide and 10 miles long on the southeastern coast of Alaska. The main street is the Tongass Narrows, a narrow channel that is part of the inland passage and the Pacific Ocean. Seaplanes and boats and ships of all descriptions enter and leave the city continually.

Ketchikan's climate is wet, with 13 feet of rainfall per year; its major industries are lumbering, pulp processing, mining, and fishing. The town also produces another product, one that is not unique to our area—children! Our school problems are not unique either. We are cramped for space; have a dropout problem or, as I see it, a push-out problem; and need more dollars to provide quality educational opportunities for our young people.

Traditional vocational education courses do not meet the needs of the pupils in the Ketchikan Gateway school system. Auto mechanics? The town has only three garages, with perhaps a dozen mechanics. Agriculture? Hopeless! Office skills and retail sales? There are only limited openings in these areas each year.

For years we had been overlooking a major industry, the maritime and fisheries industry, even though our area needs young people who are well-prepared to fill occupations connected with the sea.

Fortunately, Title III of the Elementary and Secondary Education Act (PL 89-10), which provides grants for innovative education programs, enabled us to remedy this deficiency.

We traveled to New England and to the east coast of Canada to investigate existing vocational programs in maritime industries. We visited two postsecondary programs in the United States and one in Canada that is geared for adults who have had little or no formal schooling but considerable experience on the high seas as fishermen. Since the Canadian program appealed to us, we used it as a guide in developing our own—Sea Ed.

At the start, the classes involved in our program were small, and we had control and experimental groups. The first class had 80 hours of instruction in after-school sessions. Now that the program is in its fourth year, the enrollment is 243 pupils in several classes, with 360 hours of class instruction and 40 to 50 hours of field trips on sea vessels. Initially, the materials used in the program were tried, screened, and tried again, and we continue to use this system today.

Essentially, Sea Ed prepares young men and women to work at sea or in shore-side related industries. But it also includes instruction in other disciplines (science, math, civics) as they relate to the program.

Students enter the Sea Ed program as sophomores with Marine Biology I. In the junior year, they take Sea Ed I, a course which emphasizes navigation skills. Sandwiched in with this are civics, economics, and English as well as communication skills and literature related to the maritime and fisheries industry. During the regular school day, students mend web; repair diesels; learn "rules of the road"; and troll, seine, gillnet, and trawl. When they become seniors, students may elect Marine Biology II, Power Mechanics, Electronics, or Sea Ed II.

Those who elect Sea Ed II learn advanced navigation and help teach the Sea Ed I classes. During the winter months, they sail as cadets with the state ferry system (the Alaska Marine Highway System) for one week. A licensed officer has charge of the students and assigns work responsibilities. In this phase of the program, Sea Ed pays for the students' uniforms and food and the Alaska ferry system provides the living facilities.

Students who take the cadet cruise must express a desire to obtain employment with the ferry system and demonstrate a good attitude in class. Grades do not determine a student's eligibility to take part in this phase of the program.

After a year in Sea Ed I, a student can get a job in the fishing industry. Those who complete Sea Ed II have employment opportunities on the ferries as soon as they graduate. Many of the girls in the program will obtain employment in shore-side supportive industries, and others may marry fishermen and work with their husbands on family boats. This past school year every student who wanted to work in a sea-related industry had a job offer.

We can't claim 100 percent success for the program, but, for the majority of students involved, it is an exciting learning experience. They get "turned on" about school, because their assignments have practical application for their future. □

At left: students take field trips at sea in a school-owned or a chartered vessel to put into practice what has been learned in the classroom.

The Ketchikan Gateway Borough School Board received a National School Board Award of the Association of Classroom Teachers (NEA) and the Thom McAn Shoe Company for its initiation of the Sea Ed program.

RATING YOUR SCHOOL

(A semi-lighthearted approach)

JOHN M. GRAY, *head of English Department, Nauset Regional High School, Orleans, Massachusetts.*

☐ **You know how girls dream of Prince Charming?** Well, I dream too, not of Princess Charming—I married her 25 years ago—but of a Great Idea riding into my brain on a white horse, sweeping me up and taking me off triumphantly to fame and fortune.

Up to now it hasn't happened. I've come close, but that's all. For example, watching former outstanding teachers and coaches founder as administrators, I was aware of the Peter Principal (pun!), but I never got it on paper. In the classroom I've tried a few new things, but men like John Holt have always been a book or two ahead of me.

Now at last, however, I have hit on something, a sure winner in this era of shortcuts and quick answers. With my system you can rate an entire school in about the time it takes to read this article. The key to the system is the talk that goes on in a teachers' room. Go to one and listen and then consult my checklist. Presto! You can rate the entire school.

Twelve conversation areas—I call them the Diverse Dozen—determine the rating, which in traditional school fashion ranges from A to C, including all the old familiar friends like gentlemanly C+ and hard-working old B−.

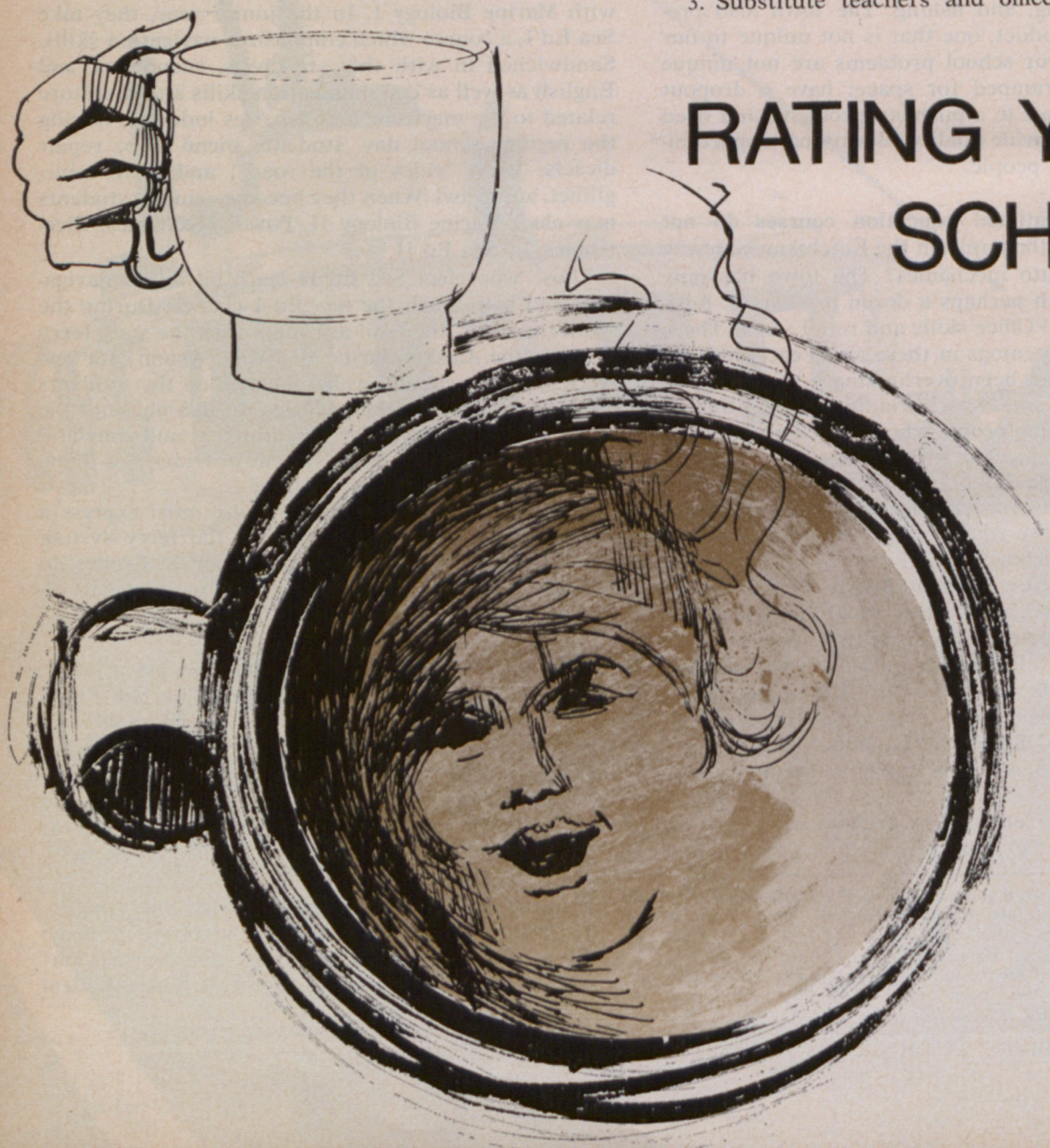
The Great Idea first galloped past me when I was working in a school that I eventually rated C−. While there, I began to wonder if all males on all faculties always talked about sports in their free periods, and all females about dieting, restaurants, and television. I asked around and found that in some schools both men and women do talk about books and education.

I began to look for a way of identifying the differences between schools. Thus the Diverse Dozen began. At first it was a series of 12 theorems, including the following:

1. Schools where drama teachers have never read Brecht, Anouilh, or Pinter seldom produce good senior class plays.

2. The larger the ratio between complaints about the principal aired in the teachers' room and those discussed directly with the principal, the worse the school is being run.

3. Substitute teachers and office secretaries who



send their children to private schools are the shortest line between the community and the truth.

I had nine more, but I realized that a great idea must have a great audience, and math turns off too many people. Games, quizzes, and rating scales are what good, red-blooded Americans go for, so I decided to produce a rating-scale checklist.

I switched jobs and found myself in a new school, where things were much better. As I began to recover a sense of respect for my fellow teachers, I tried to get my scale to reflect some of the differences I'd found between the new school and the old one.

In the new school we talked more about education and the world of ideas. I learned more about my colleagues than just their favorite foods and athletes.

For example, I heard a math teacher, correcting papers, exult, "Hey! Betty Nicholson is going to pass this test. This is the best work she's done all year." Then a moment later he added, "My gosh, she's going to get a B. Isn't that something!" The exulter couldn't have been more excited if he'd been the golf coach (which he was), and the team hacker had come in with a string of pars.

Too many teachers I've known would have corrected that test in silence and then growled, "Betty Nicholson finally passed a test. I'm suspicious—I'd better move her seat." The contrast between scenes like the one in which the math teacher delighted over a student's improvement and the ones I'd experienced in some other schools spurred me on to search for more checklist material.

My scale had to measure the difference between the exulter and the growler. I wanted fairly specific factors to reflect somewhat subjective ratings. The Diverse Dozen ultimately satisfied my requirements better than any other listings I considered.

Keeping track of the frequency of occurrence of these 12 things in your teachers' room is the key to my rating system.

The seven topics on the positive side are:

1. Mentioning individual kids' accomplishments. The teachers' room should buzz with bragging, much like a bridge club of proud grandmas showing snapshots of their grandchildren.

2. Praising class successes. Like the coach of a winning team, teachers should have pride in a group as a whole when some class has really clicked. If *we* don't comment on it, who will?

3. Sharing lesson plans. If a teacher has a good idea, he should be ready to share it. If he never talks about his ideas, the chances are he doesn't have any.

4. Complimenting the administration. Principals who are doing a bad job usually get as much sycophantic praise from their inner circle of buddies as a good principal gets from his whole staff. Praise in the teachers' room, however, is a true sign that things are being handled well from the top.

5. Discussing books and periodicals. According to my old-fashioned lights, teachers should read books, newspapers, and magazines, and they should be telling others about what they read.

6. Analyzing films, plays, and television shows. The teachers who make this kind of effort are intellectually adventurous.

7. Conversing about community affairs. A teacher will show concern for the total community if he really cares about his pupils. After all, they have to live there.

Teacher-room talk can indicate the quality of a school in a negative way as well. The following five activities illustrate the seamy side:

1. Engaging in racial slurs. Prejudice is not a quality of a good teacher. Whenever you hear a teacher revealing the fact that he is prejudiced, you know you have heard something bad about your school. Sometimes the prejudice is fairly subtle, but you can usually hear between the lines. Then, chalk up negative points for the teachers' room.

2. Deprecating individual kids. Teachers aren't normal if they don't come into the teachers' room and let off steam when a kid gets them down, but the less they do it, the better.

3. Complaining about an entire class. When a teacher gives up on a whole class and starts to complain about how worthless the group is, there's a very strong possibility that someone else is worthless, too.

4. Expressing contempt for the administration. Some administrators certainly deserve contempt, but it's a bad sign for the system as a whole when such remarks are made, whether deserved or not.

5. Discussing personal problems. Everyone talks about them sometimes. You just have to use your judgment on this rating as to whether or not there is a too steady stream of complaints about financial woes, in-laws, family illnesses, etc.

There you have it—my Diverse Dozen topics for you to listen for in your teachers' room. Once you've determined their frequency, you can figure out your school's rating.

If an item occurs frequently, chalk up two points. If it occurs occasionally, score one. If such conversation topics are seldom or never heard in your teachers' room, score a zero.

After you've rated the 12 items, subtract the negative total from the positive. If your school is a frigid below-zero organization, the best rating you can give it is a C. Give it a B− for 1 to 3, a B for 4 to 6, a B+ for 7 to 8. Rate your school A− if it hits 9, and give it a straight A for anything from 10 to the maximum possible, 14.

If you are disappointed at how your school comes out in the rating, why not talk about it in the teachers' room? The minute you get the topic started, you'll be on your way to a higher rating.

You may not feel that my Great Idea has carried me off to much of a glory ride, but I hope you do see at least that what goes on in a teachers' room is a good indication of where and how your school is going. A change for the better in teacher-room attitudes, a change that almost any individual teacher could initiate, can be the first step toward real improvement in your school. □

says **SAMUEL M. BURT,** *director, American University's Business Council for International Understanding Program, Washington, DC*

□ **Many people believe, as I do, that a school superintendent** should be part of the power structure of his city. As such, he can play an important role in shaping community attitudes toward educational matters. That this does not always happen is a sad commentary and perhaps an explanation of why so many public school administrators are beginning to see a connection between school finances and the low state of their community relationships. I believe we could resolve a major portion of these money problems by enlisting the help of industrial, business, professional, and labor leaders on a voluntary basis in educational programs. (For brevity, we'll use the word *industry* hereafter to designate all areas of the private sector.)

It has been shown that in communities where industry backs the superintendent and the schools, there is almost no limit to the support that can be mustered from the general public and elected officials. By the same token, if industry is antagonistic and critical, at worst, or apathetic, at best, community support for schools will be weak and the general public as well as elected officials will be critical or even disruptive.

Involving industrial leaders in education on a volunteer basis is an American tradition that provides considerable prestige and personal satisfaction to those so involved. Several hundred thousand of these people now serve as members of boards of education, vocational program advisory committees, or ad hoc citizen committees organized by superintendents or boards of education. The variety of their services ranges from assistance in formulating policy to improving administration, developing curriculums, tutoring students, evaluating programs, and providing financial support.

Despite the fact that disruption of our public schools has now reached epidemic proportions, many superintendents are still reluctant to enlist business support for education. Study after study reveals that when industry people volunteer assistance they are often rebuffed or treated with suspicion. Even if the offers are accepted, some educators exhibit so little understanding of business resources and motivation

as to discourage in-depth participation by industry. On the other hand, administrators who do involve industry in public education have been able to tap a wealth of resources, including money, to enrich their programs.

I want to emphasize a major point: Whatever assistance a company provides, the specifics are developed in cooperation with school officials. Cooperative planning marks all the hundreds of successful industry-education programs documented in recent months. Why then is there such distrust of business motives?

Basically, many school people believe industry's motivation stems from a desire to use the schools as markets for their products or to serve as a base for recruiting and training manpower for narrowly defined occupational classifications.

Frankly, there was some justification for this viewpoint in the past. But the launching of Sputnik in 1957 and the beginning of our nation's war on poverty broadened industry's perspective. It now seeks *educated* as well as trained employees for its offices, stores, shops, and factories. The expanding social conscience of industry leads industry to conclude that we must have good schools before other ills of our urban society can be solved. Thus, the stage is set for increasing rapport between industry and education.

Recent surveys of business attitudes toward social problems indicate industry's readiness to be involved. In 1968, the National Industrial Conference Board published the results of a study of participation in public affairs by more than 1,000 companies. More than half the companies expressed willingness *to initiate action* to help solve socioeconomic problems. Matters receiving the highest percentage of attention were those most closely related to business interests. Some of the areas concerned with education included expansion of local school facilities, problems associated with dropouts, improvement of local school curriculums, and improvement of work-career opportunities for minority groups.

In September 1969, *Fortune* magazine asked 300 business executives this question: How far should business go in trying to solve social problems? The results showed industry to be increasingly involved with societal activities that go beyond the quest for profits and also that some activities are far more popular than others. *Support of education* was rated number one on this hit parade.

Industrial leaders are more anxious now than ever before to help schools because of their traumatic experiences in hiring and training large numbers of so-called disadvantaged youths and adults. They have found these people to be deficient not only in job-seeking and job-retention skills but also in the basic fundamentals. They have found it necessary to give this type of education—as well as health and other social services—to disadvantaged new employees.

Although industry is now able to conduct basic education programs, it would naturally prefer that such teaching be done in the schools because it has learned that prevention is much less costly than remediation.

My research identifies more than 50 specific types of volunteer industry involvement that are taking place in cooperation with school administrators. All can be grouped under these categories: (a) Improvement of instructional programs in classrooms, shops, and science labs; (b) participation in work-study programs and curriculum revision; (c) preparation of job placement and career guidance information; (d) assistance in professional growth programs for teachers and recognition incentive programs for students; (e) provision of administrative supportive services; (f) participation in the schools' public relations activities; and (g) opening of industrial facilities to schools and donation of material and financial resources.

A 1966 study of the New Haven, Connecticut, school

American Industrial Arts Association

❑ **The American Industrial Arts Association, an** NEA national affiliate, has launched into a two-year project designed to encourage the community to cooperate with schools. The AIAA is conducting eight regional invitational forums involving organized resources of our society. Participants are asked to examine the promises and problems of technology as related to man and his environment, with the focus on improvement of industrial arts programs and industrial arts teacher education.

Among the many outcomes of these regional forums will be the establishment of an interdisciplinary base of government, labor, industry, and education to work more effectively on the promises and problems of man, society, and technology. The ultimate result will be the improvement of instructional programs in industrial arts and, hopefully, also in other subject matter areas. Optimally, the forums will develop a plan for implementing an educational partnership to coordinate and utilize available community resources for each state.

Many educators rely on industrial arts education in the elementary and secondary schools as the best means of resolving some of our nation's frustrations in manpower development. Schools are supporting industrial arts programs in the lower grades because these programs afford the opportunity to teach occupational information and to develop a technical literacy about our world. Labor, industry, and government groups would provide additional input into these programs that would make them more effective in reflecting the world of technology to children.

More information concerning the AIAA invitational forums can be obtained by writing to the AIAA, NEA Center.

—Edward Kabakjian, *executive secretary and treasurer, American Industrial Arts Association, NEA.*

National Science Teachers Association

□ **I am pleased to report on the success of business-industry cooperation** with the National Science Teachers Association, an NEA associated organization, over the past 25 years. A dozen or more major services and activities of NSTA—reaching several thousand science teachers and their students—have been made possible through this cooperative effort.

Business-industry support has enabled the Association to procure and distribute a variety of materials: pamphlets, films, charts, and kits. Industry support has also enabled NSTA to generate summer research programs for teachers, to produce and disseminate career information and guidance materials for students, and to design specialized conferences for science teachers.

Activities undertaken by NSTA's Future Scientists of America have enjoyed business-industry support for more than a decade. Our newest student offering, Tomorrow's Scientists and Engineers, is a program of scholarships, educational assistance awards, and other recognition supported by an annual grant of $135,000 from a large science-based company.

But dollars alone do not make for success and understanding. The men and women engaged in educational relations activities in various companies and corporations are a resource of solid significance for NSTA. They participate in numerous ways to help achieve our purposes—by serving on committees, sharing in writing publications, and helping to design conventions and conferences.

Moreover, these people have had an official home in NSTA ever since 1950, when they organized the Business-Industry Section. In 1964, they became the National Association for Industry Education Cooperation. Today NAIEC has a membership of 330 persons, whose activities have extended beyond science into other areas of the curriculum.

The NSTA-NAIEC relationship has been happy and fruitful. Joint planning and joint action contribute to the goals of both groups by helping teachers and students at all educational levels.

—Robert H. Carleton, *executive secretary, National Science Teachers Association, NEA.*

system documented the benefits of involving industry executives. After several months of conversation between school administrators and top executives at Olin (the largest employer in that area), the company agreed to make one of its management consultants available for six months, on a full-time basis. The following year, the consultant submitted his findings to the school system—45 recommendations developed in conjunction with school people.

When the Southern New England Telephone Company offered its assistance at about the same time, the school superintendent asked that company to implement the recommendations. Three executives from SNETC were assigned to assist the superintendent in improving data processing, office management, records and contract administrations, and communications within and without the system.

Although it is still too early for full evaluation, several accomplishments are credited to the effort: production of an administrator's manual of policies applicable to all phases of school administration; a series of management training sessions for educational leaders; development of organization charts for the entire school system; a suggested multifaceted public relations program; and assistance in developing a plan to organize advisory councils for each school.

Note that the business firms involved sought no publicity for themselves and made no attempt to impose outside authority on school people. Results may show many still unrealized benefits, accruing primarily from a better understanding of school problems by industry. Most important of all, perhaps, is the fact that school people now feel they have allies in their business community.

Industry initiates most industry-education programs, even in the field of vocational education, with its 50-year history of industry involvement. Many industry people claim that the superintendents in their communities have neither provided the proper climate nor support for industry participation. If so, this is shortsighted, for keeping industry at arm's length will mean loss of the only community resource able to provide the kind of support schools need. Indeed, I am willing to wager that local school systems which have been denied bond issues by the taxpayers are often those with no organized, communitywide involvement of business and industry in the schools.

Even when school administrators are prepared to take the first giant steps in welcoming assistance, there is the problem of exactly what they should ask industry to do. Recognition of this fact has led industry to finance community resources workshops that enable representatives of industry and other community organizations to discuss mutual interests with educational leaders. By taking part in activities such as these, educators learn what to ask industry to do and how to organize this involvement. Industry, for its part, learns how to participate effectively in school matters—to the benefit of the community and, eventually, to its own best interests.

If it is true, as reported in the November 1969 issue of *Nation's Schools,* that the typical school superintendent is overwhelmed by financial problems and worries about school-community public relations, he should be delighted to find industry ready, willing, and able to offer assistance. As in so many other areas of daily living, it's surprising how much help is available if you but ask for it. □

Readers' reactions—pro and con—are invited for possible use in a future issue of TODAY'S EDUCATON.

Rescheduling the School Year

The NEA Representative Assembly officially adopted the statement below at San Francisco in 1970. The Association of Classroom Teachers had drafted the statement at the request of the NEA Executive Committee. The statement had received the endorsement of the Committee and of the NEA Board of Directors before its presentation to the Representative Assembly for action. Reprints of this page (Stock No. 351-10858) are available at 50¢ for a minimum order of 10 copies ($5 for 100) from Publications-Sales Section, 1201 16th St., N.W., Washington, DC 20036.

□ **The National Education Association recognizes** that although potential values may be gained from rescheduling the school year, the extension of the school year may not in and of itself necessarily be in the best interest of the students and the community. The NEA recognizes further that no one model for the year-round school is universally desirable or applicable but rather that each school district should vary the design of its school year to fit its own needs. Therefore, the NEA urges its state and local affiliates to take the initiative—

1. In exploring the many ways the school year might be extended to accomplish specific goals (remedial, enrichment, acceleration, recreational, etc.) for students.

2. In examining ways to provide for maximum use of school facilities by the whole community.

3. In identifying the advantages and disadvantages of each proposal.

4. In considering the legal implications of a rescheduled school year (e.g., Do state laws permit flexibility of programing and use of state school aid for an extended school year?)

5. In assessing the adequacy of the financial resources and current school facilities (e.g., Is air-conditioning a major factor to be considered in relationship to programs proposed for implementation during the summer months?)

6. In determining ways of selecting and assigning staff which will be both effective in terms of the school program and fair and equitable in terms of the demands placed on staff.

7. In encouraging and helping develop plans for experimentation by the local system in the rescheduling of its school year toward the end that the school system individualize and maximize its school program to best meet the needs of its students and the community.

8. In evaluating carefully the results of the experimentation and providing basic facts for further consideration.

9. In providing for incorporation into the regular school program of those models of the extended year which indicate value through experimentation.

10. In keeping the public informed and involved as the plans and possible implementation of an extended year are conceived and developed.

The NEA maintains that all concerned parties—representatives of the local professional association including classroom teachers from the various grade levels, administrators, board of education, and key community groups—must be involved from the beginning in exploring and implementing any program for extending the school year.

The NEA believes that, regardless of the models designed for experimentation and their ultimate implementation, the local association has a responsibility to its members to negotiate compensation on a pro rata basis of the contracted year for those teachers engaged by the school district for services beyond the regular school year.

The NEA recommends that *The Rescheduled School Year* (NEA Research Summary 1968-S2)—which (a) provides historical background, (b) summarizes the benefits and problems identified to date by school systems which have extended the school year, (c) describes a variety of interesting and significant year-round programs, and (d) lists a comprehensive selected bibliography—be used as a basic resource document in initiating a study of the year-round school. □

The Bilingually

Advantaged

Buenos días, niños.
Me llamo la Señora Grundigh.
Seré su maestra de primer año.
Escuchen cuidadosamente mientras
les digo los reglamentos
que hay que observar. . . .

JUDITH RAE GATES, *curriculum development specialist, San Antonio (Texas) Independent School District.*

☐ **What is your reaction to the above paragraph**—assuming you aren't fluent in Spanish? Did you quit reading in the middle of the first sentence or did you stumble through, translating word for word and still not understanding?

Thousands of Mexican American children who each fall enter school for the first time have a similar problem with English. Not only are they faced with the usual first-day-of-school tremors in a school far away from Mamá and their hermanos or hermanas, but they are also bombarded with a strange language they don't understand.

Teachers have used several approaches in efforts to help these children. The traditional method was based on the premise that use of Spanish at school would retard the learning of English. Fluency in English must therefore be the goal of these students and would naturally precede all other learning.

This viewpoint reflected the prevailing philosophy of the times, which implied that America must assimilate people of other cultures and that the public schools must serve as the main melting pot for the nation. Of course 80 percent of the Mexican American pupils might have to repeat the first grade because of language problems, but this was simply labeled as an unfortunate occurrence for the individual student. (Besides, everyone agreed, "He really didn't try.")

The second approach acknowledged the problem facing these pupils, but it was based on the false premise that learning a language consists of learning words. The School of 400, set up in many school districts in Texas, California, and other states, provided preschool Spanish-speaking students with a crash course to acquaint them with at least 400 English words. The students were then supposed to be able to enter first grade and compete with their Anglo counterparts. The fallacy of this approach is obvious: How can a student who knows only 400 words compete with an English-speaking child who has an active vocabulary of 2,000 words or more?

A third approach, that of teaching English as a Second Language (ESL), has this basic philosophy: Since all children need to learn English, schools should devote much of their time to teaching in and through English. This approach recognizes that since English is not the child's first language, some concessions must be made in teaching techniques—for example, in presenting vocabulary items within a prescribed syntax. Yet the only use of the child's first or "home" language in this kind of program is vocalization of a few words to facilitate communication between teacher and pupil.

ESL is based on methods used in teaching a foreign language: The teacher provides a model sentence pattern; the student learns and repeats it. The teacher then introduces a new word which the child uses in the sentence pattern he has already learned.

ESL is a step in the right direction, but it places the home language in an undesirable position by requiring that English be learned before any real conceptual development can follow. Yet how can students talk about concepts when material is limited to providing a language rather than concepts?

A fourth approach is based on the realization that the child's home language is almost always the most completely developed; therefore, it is the best medium for teaching children to read and write. Ap-

In May 1970, the San Antonio Board of Education received a National School Board Award of the Association of Classroom Teachers (NEA) and the Thom McAn Shoe Company for its effective bilingual program.

propriately, this is called the bilingual approach.

Full recognition is given to the fact that English is a second language for the students. Although they need to learn English, they can begin to develop skills for acquiring information in a language they understand. When using this approach, a teacher presents all lessons during the first few weeks of school in the home language. As the child becomes adjusted to the strange world of school, the teacher introduces a few English words. But skills and conceptual items are in the home language.

When students seem ready—perhaps in the second half of the first year—the teacher increases development of oral English (ESL) to fill perhaps 10 percent of the day. In each succeeding year, he offers more and more of this instruction. If a student's first year is kindergarten, half of his classes are in English by the time he's in the fourth grade and chances are he has become bilingual. The potential of this approach seems obvious because the earlier children use a language the more internalized it becomes.

Socially and financially successful families have always insisted that their children become proficient not only in English but also in an additional language. Yet we tend to brand students who arrive at school speaking a different language as *disadvantaged*. I believe we should change this tag to *advantaged*. I am not trying to negate the value of and the necessity for learning English but rather to establish the advantage of being bilingual and in turn bicultural.

Most everyone agrees that knowledge of one language generally enhances one's ability to learn a second one. In fact, a person's linguistic ability usually grows with the addition of each new language—if the language one speaks at home is not relegated to the back room. Furthermore, a bilingual education would certainly be a forward step against the ethnocentrism which plagues our country.

Thomas D. Horn of the Curriculum and Instruction Department of the College of Education, University of Texas, came to San Antonio in 1964 to cooperate with the city school district's Title III (ESEA) Bilingual Demonstration Project in conducting research on teaching oral English and reading readiness to disadvantaged children who were not native speakers of the language. The program was originally designed to effect reading readiness using ESL techniques. After Dr. Horn experimented with various methods, he recommended using oral language development materials adapted from the American Association for the Advancement of Science (AAAS) program, which do not discriminate against children who have had limited experiences before attending school. Teachers presented this material orally to first grade students for approximately 30 minutes in the morning and 30 minutes in the afternoon. Teachers used English with one experimental group, Spanish with the other.

Shortly after the program started, teachers noted the importance of enhancing the self-concept for these students. Thus materials were developed to give students positive concepts of themselves: "I am a unique person, important to my family, my teacher, my fellow students, and the larger world."

In late 1967, the San Antonio School District contracted with the Southwest Educational Development Laboratory (SEDL) to design sequential structural oral language materials. Instructional techniques were basically the same as those used in the ESL approach, but the programs, which were labeled OAE and OAS (Oral-Aural English and Oral-Aural Spanish), followed the pattern by which babies learn a language. They hear a language first; then repeat what they hear. Much later they learn to read and finally to write words they already know.

Presentation of this material enabled students to hear sentence structures and repetitive sentence patterns dealing with science and social studies. When well-acquainted with the sounds and meanings, students could internalize the patterns by repeating models provided by the teacher. They were then able to substitute word forms in the slots and carry on dialogues with the teacher.

Interpretation of personal experiences provided impetus for further reading. When the class went on a field trip, for example, the reading lesson for the week would probably be one the students developed with the help of the teacher who directed a question-and-answer session and recorded all student responses. Students then read their own answers and comments about an experience they'd already had (rather than reading something about the snow-covered spruce trees which even Anglo children in our part of the country have trouble understanding).

Young people participating in this project made some improvement in language development and IQ scores, but the more immediate encouragement came from daily classroom behavior: Instead of being apathetic, students began asking for more information as well as demonstrating a greater willingness to try new things and a growing sensitivity to their environment.

In 1968 Josué González became director of bilingual education activities for the San Antonio school district. He expressed concern about the relatively limited emphasis placed on the child's home language (Spanish) in instruction. He noticed with interest the pleasure these youngsters showed in relevant materials. If relevancy is the key to helping first graders succeed, he reasoned, what would be more relevant than providing a curriculum in their home language?

About this same time, many local educators—myself included—observed that within a year or less fourth and fifth graders moving into the San Antonio district from Mexico could speak almost as much English as their Mexican American peers. They also achieved significantly more in basic conceptual areas, according to standard achievement tests.

My first reaction, as a fairly inexperienced teacher, was to conclude that Mexico's schools must be more efficient than ours. Watching these young people perform, however, made me decide that the difference between them and our own Mexican American stu-

(*Continued on page* 56)

CLASSROOM TEACHERS OF DALLAS

JEWEL L. HOWARD, *president, Classroom Teachers of Dallas; on leave from her position as an elementary school music teacher.*

□ **Just as education has come a** long way from the one-room schoolhouse, the Classroom Teachers of Dallas has come a long way from a two-room rented office. In 1967, CTD moved into its own headquarters building after more than 10 years of dreaming and planning.

In the mid fifties, two teacher organizations in Dallas, one for secondary and the other for elementary teachers, merged to form CTD. This new association pledged itself to work for its own headquarters building, one that now serves as the hub of CTD activities. The 250 faculty representatives of the association meet at the building monthly.

Since moving into the building, CTD's staff, which serves 6,200 members, has grown from one secretary to a staff of seven (an executive director, an assistant to the executive director, two secretaries, a newspaper assistant, a part-time clerk, and a part-time auditor). In addition, I devote full time to my duties as president because two years ago the district began releasing the CTD president from all teaching assignments during his tenure of office.

Probably the association began to come of age professionally when it decided to employ professional staff. The groundwork for this was laid in 1966 by a constitutional amendment that raised dues to $10. This year dues are $15, plus those for required membership in the Texas State Teachers Association.

The CTD Faculty Representative Assembly recently voted for a feasibility study on unification by next year with the Texas Classroom Teachers Association and the NEA.

Since acquiring professional staff and a full-time president, CTD has been able to have a continuous, coordinated program and to open new communication lines with teachers, administrators, school board members, legislators, and citizens.

Today the association president has the time to visit schools, talk with faculty members, attend board meetings, and carry on a much more extensive correspondence than the president of a few years ago.

This year CTD hired an assistant to the executive director to handle public relations and publications in order to make the general public and CTD members more aware of association activities. The organization's monthly newspaper, the *CTD News,* is distributed to members by direct mail.

A Teachergram keeps members informed of events that occur between the issues of the paper. Members also receive a handbook, which includes the constitution, the list of officers, the Code of Ethics, the grievance procedure, the salary schedule, and statements of CTD policy.

Realizing that educational decisions are political ones, CTD has involved itself more and more in the political arena. The CTD Legislative Committee and the Dallas County Educator's Legislative Council keep members informed of political developments that affect education, and the association lobbies in Austin and Washington for education legislation. Also, a group of Dallas teachers has formed a political-action arm to endorse local, state, and national candidates.

Professional negotiation and advocacy of teacher rights are two major areas of CTD concern, which Executive Director Herbert V. Cooke, Jr., feels are key components of a modern teacher association.

During the 1968-69 school year, a Professional Consultation Agreement formalized negotiation procedures for CTD representatives and the superintendent. Under the Agreement, if the association does not receive what it considers to be an equitable answer to a proposal it has made to the superintendent, the association may then present its case to the board of education.

Dallas teachers are now able to question applications of school district policy through a grievance procedure CTD developed. To inform members of how the procedure works, the CTD newspaper publicized the 11 grievances processed during the last school year.

In 1969, CTD retained a law firm to provide legal counsel to association members on a group basis and, in some instances, on an individual one.

Several years' work in the area of teacher rights and welfare came to fruition this spring when the board of education adopted the following CTD proposals:

1. An index salary schedule that recognizes the career teacher
2. A leave package that includes two days of personal leave, in addition to provisions for sabbatical leave and changes in policy regarding maternity leave, military leave, health leave, and hardship leave
3. A two-week winter recess and a one-week spring recess
4. Placing United Fund solicitation in the hands of the teachers
5. A cultural-exchange teaching program that allows teachers to work on a trial basis in cultural surroundings different from those in which they had been teaching.

In planning for the seventies, the association will continue to improve the working conditions and the economic position of its members but will balance these efforts with an extensive program in improving human relations and curriculum. This school year the association plans to hold a Human Relations Workshop and to establish a Human Relations Center at the CTD Building. In addition, the Instructional Services Committee has been reactivated to evaluate curriculum. □

"STEVE, GO WASH YOUR HANDS!"

JEANNE H. WARD, *former teacher of English and Latin, Lancaster (Minnesota) High School.*

□ **My silent prayers in school increased in frequency** and intensity when Steve entered my third grade class.

Steve had the roundest eyes, dirtiest hands, and wildest imagination I've ever known. These three characteristics worked together toward the disruption of my class's decorum and severely tried my professional patience.

Why couldn't he be quiet and clean some mornings? Why couldn't he at least have clean hands? Why must so many mornings have messy beginnings? End-of-the-day filth was bad enough but more easily forgiven. Trouble every morning? That was just too much. Indoor dirt, mud and snow in season, food, ink from a detonated ball-point pen, nail polish, glue, malodorous traces of this and that from barn or field—these and more made Steve a frequent visitor to the wash-bowls in the boys' lavatory. The fact that his goings and comings to the washroom cut into his class and study time considerably gave him not an instant of regret.

Spring was Steve's best season. The reawakening of the earth was an inspiration to him.

One spring morning Steve's always loud voice started the school day with:

"This is a real tick with blood in him. He told me his name is Harold. Watch while I squash Harold!"

(Be patient. Maybe this boy has problems you know nothing of.)

"Steve, throw Harold away and go wash your hands!" Then a little later:

"This bird flew down and asked me to hold it for a while, but it left some little white bugs."

(He must have no one to show things to at home. Act interested!)

"Steve, get rid of all the white bugs. Go wash your hands!"

And again:

"Mr. Craig's dog asked me to help him get a gopher. I did. The gopher cried."

(Why don't his parents discuss the gopher, clean Steve up, and then send him to school?)

"Steve, go wash your hands."

Frustrated and annoyed, I put Steve's name on the list of the school's home visitor. She reported back that there was trouble between the parents but that the home had acceptable standards and there didn't seem to be an obvious reason why Steve shouldn't come to school clean. Steve's mother (who looked chronically worried, the visitor said) insisted that Steve's hands were clean when he left the house but

As announced in the November issue, this story on "High Drama in My Classroom" won the $350 third prize in the 1970 TODAY'S EDUCATION-Reader's Digest Foundation Teachers' Writing Competition.

that he had always been inquisitive about animals and things and couldn't resist handling whatever aroused his curiosity.

Soon again at the beginning of the school day:

"This fish in the crick came up three times. The first time he said, 'Steve, make a wish . . .' "

(Can't you listen and see how the story comes out? Try!)

"Steve, go wash your hands."

Later:

"Look, those smooth rocks are magic. If you rub them and say, 'Rocka-wocka-rock-wocka,' they will make something nice happen."

(Why don't you listen? Why don't *you* make something nice happen?)

"Steve, go wash your hands."

Sometimes it wasn't nature, just the cafeteria that caused a problem:

"Peanut butter is really glue. I made this myself from my own peanuts. Look at these papers stick together."

(It *is* remarkably adhesive, you know.)

"Steve, go wash your hands!"

Days later, I asked for a second home visit. The visitor reported that there was real strife between the parents, but Steve's mother promised that his hands would be cleaner when he came to school.

The next morning:

"A robin gave me one of her eggs, but it's smashed. There was a baby bird in it. I'm sorry."

(When you were young, didn't you ever touch a robin's egg?)

"Steve, go wash your hands!"

And the next morning:

"This caterpillar really had tobacco juice in it, but an elf turned it green."

(Maybe he needs professional help.)

"Steve, go wash your hands!"

The next day:

"Our cat had seven kittens last night. I watched and helped, but she screamed anyway."

(Oh, no!)

"Steve, go wash your hands!"

Desperate, I decided to make a visit to Steve's home myself. As I stepped onto the small porch, I heard a woman's terrified voice saying, "No, you can't. Put it down! At least think of Steve."

"OK, but just once more and you get it!"

I ran away quietly, but my heart pounded for an hour afterward.

The next morning Steve was not in an announcing mood. He said not a word for almost an hour. Then he crept up to my desk and whispered, "My daddy shot my mother in the chest last night and then he shot himself. I touched my mother."

I looked at Steve's hands.

"Oh, Steve! Oh, Stevie! Oh, Stevie, come here. □

ARE YOU POLITICALLY INVOLVED?

If not, you should be, says a teacher-politician.

WAYNE SANSTEAD, *social studies teacher and debate coach, Minot (North Dakota) High School.*

□ **Initially I sought public office because I was an** "angry young man" who felt much needed to be done in my state, not only about education but also about other important issues. I didn't run as an education candidate, therefore, because I wanted to make it clear that I would work for *all* interests in my community rather than confine myself entirely to educational needs.

I remember vividly the first day of my freshman year in the North Dakota legislature when I was a fledgling of 29. I took a seat in the back row of the Capitol chamber along with the other newly elected lawmakers, including two who were even younger than I. As we were twisting our big chairs around and looking up at the ceiling, somewhat overawed, a veteran legislator, who had been there for many sessions, came over to us, smoking a big cigar and wearing a cowboy outfit complete with hand-tooled leather boots. Unable to hide his disgust with us greenhorns, he asked, "You boys want to know how to stay out of trouble here?" Figuring that we did, we nodded, and he went on, "Just vote no on everything." This man who had been reelected so many times had done just that, year in and year out.

After three terms in the legislature, I can understand why so many lawmakers say, "There will always be another session," but this "wait until next year" attitude is something educators have had to live with for too long. One reason why I, a teacher, am in the legislature is to help measures dealing with education keep pace with other important community concerns.

Yet I think we must realize that an individual may have difficulty determining what really are the best policies for his state and his district. I meet far too many legislators who support only one point of view. In some districts, there is a predominance of one interest; however, there are always several issues even in such districts. When you communicate with your legislator, remember that he has a responsibility to the whole district and to his entire state, even though special interest groups are useful in providing him with helpful information.

After serving three terms in the state house of representatives, Mr. Sanstead ran for the state senate this year and won by a large margin.

In the last session of North Dakota's House of Representatives, we had 280 registered lobbyists for 147 elected legislators. I'm proud to say that three of these represented education, and I worked closely with them. I am reminded of a saying by a former speaker of the House: "An upright politician is one who remains in a vertical position because of equal pressure from all directions." Obviously, one of the reasons why we, as educators, are in the political arena is that we want to make sure some of that pressure comes from our side.

I have had the chance to watch the North Dakota Medical Association, railroad and trucking interests, AFL-CIO, various farm groups, and others at work. These groups have a strong influence on legislation—and rightfully so. But educators also have a responsibility for getting involved. We must do all we can, as individuals and as members of associations, to make sure that teachers are not discriminated against because of their political activity at any level. We must recognize there are those who would deny, even in this day, the right of a teacher to any expression in policy-making decisions in his community, state, and nation.

Those who were in the North Dakota House during the 1965 session heard this "second-class citizen" view expressed in debates over permissive legislation to increase sick leave benefits for North Dakota teachers. One legislator, apparently irritated by the favorable consideration being given education bills that had been rejected in the past, stated: "Teachers should stay in their classrooms where they belong. These bills shouldn't reach the floor for time-consuming debate."

I was proud when fellow freshman legislator Richard Larsen, a University of North Dakota professor and currently my state's lieutenant governor, promptly responded: "By that logic, the 86 farmers and ranchers in this legislature and the 38 businessmen and 12 lawyers who are here ought to stay in their respective occupational positions." He didn't need to explain that under such circumstances, our system of representative government would soon collapse.

One of the most significant processes of government is that of policy determination, which involves making decisions that are binding on all members of a political community. Our society has far too many problems—economic, social, and political—for edu-

cators to accept no responsibility for helping find the solutions.

As thinkers and leaders of our communities, we should be among the vanguard of those concerned about the great issues of our time and of the future. We cannot shun either controversy or decision making, fraught with danger though they may be, for history records that it is only those willing to study and evaluate, to take a stand, and to be courageous in their convictions whose leadership is remembered.

We must also remember that inaction can be just as deadly as improper action. In the area of citizenship, this is the error of which far too many educators are guilty.

As teachers, we are charged with the heavy responsibility of promoting good citizenship practices and respect for the institutions of American government. The best way to instill such appreciation and understanding is for us to be examples of knowledgeable citizens in political roles. Nonetheless, some teachers have absented themselves from precinct politics and campaign struggles. Separating this important phase of American political activity from citizenship, they feel they have fulfilled their obligation as citizens by merely voting for issues or candidates selected by their precinct organization.

I disagree. As Pericles, one of the earliest of civilization's democratic citizens, wrote: "We differ from other states in regarding the man who holds aloof from public office not as quiet but as useless; we decide or debate, carefully and in person, all matters of policy, holding not that words and deeds go ill together but that acts are foredoomed to failure when undertaken undiscussed."

In an address to the forty-first state assembly, North Dakota's Governor William L. Guy had this to say about how young people view adult political participation:

"The youth of our nation is becoming increasingly aware of the hypocrisy of its elders who curse the inadequacies of our political system but who do not lift a finger to improve matters."

Most states are in need of reforms for which youth is eager. Reform is needed in the relationship between the legislative and executive branches of government. Reform is needed to correct unnecessary limitations and restrictions on the length of legislative sessions and on the subject matter with which they deal. Reform is also needed in such matters as length of terms, compensation, and committee structure and membership.

Elected officials should not have to take full responsibility for bringing about needed reforms, however. Attention to legislative change is also the responsibility of the electorate, and citizens must be alerted to the need for their active participation in governmental matters.

All of us, then, as educator-citizens, must accept the fact that one of the processes of democracy is individual and group political involvement. Such involvement leads in turn to public concern for educational legislation that can weave a pattern of excellence and opportunity for all students.

Recently, I received a letter from a former opposition party legislator who is now a school board attorney. He wrote: "I hope you will stay in the political arena. It is all right to have party labels, but it is even more important to have people of different labels who can join and work together for the benefit of our community." It is to this goal, working together for the benefit of all members of our community, state, and nation, that teacher-legislators must dedicate themselves. In fact, isn't that a worthy goal for all educators? □

Teacher in Politics

◆ *The NEA Citizenship Committee is compiling data on teacher-politicians and would like biographies, pictures, and other pertinent information about them. Send materials to the NEA Citizenship Committee, 1201 Sixteenth St., N.W., Washington, DC 20036.*

"Look, Pop! Environment!"

Cartoon by B. Tobey; © 1970, The New Yorker Magazine, Inc.

YOUR PERSONAL FINANCES

Buy or Rent?

ROBERT W. MURRAY, JR., *special assistant to the news director, U.S. Department of Housing and Urban Development, is the author of* How To Buy the Right House at the Right Price *(Collier Books). The views expressed in his article do not necessarily reflect those of HUD.*

□ **For people in search of good housing, these are the** best of times for some, the worst of times for others.

It is the best of times for hundreds of thousands of moderate-income families who can now buy houses and rent apartments with the help of federal subsidy programs. Many teachers are moving into units that the government helps them buy or rent.

It is the worst of times for many other families who cannot obtain federal help and cannot afford to move into better quarters. Many homeowners are staying put these days because they find they couldn't even buy their present homes if they didn't already own them. A friend of mine had that experience when he recently decided that perhaps he should live in somewhat better quarters and started looking around. He had bought his home 15 years ago with a 4½ percent mortgage on which he pays $180 a month. He was shocked to learn that, in order to get housing merely on a par with what he now enjoys, he would either have to pay $450 a month for an apartment or buy a house with $10,000 down and a $350 monthly payment. No dice.

Despite problems of this sort, millions of people will move in the coming year from one dwelling to another, some renting, some buying, some selling.

Have you been thinking about buying a home soon? Maybe you shouldn't buy one, at least not now. Have you considered selling now with the idea of making a big profit while prices are high? If so, you might be surprised to see how fast those profits disappear after you sell. Have you given no thought at all lately to buying a home? Maybe you should start thinking.

How high a price can you afford for a house—new or old? The most often heard formula is "two-and-a half times your annual gross income." Forget it! A more useful guideline says you should not undertake to pay more than 25 percent of your monthly take-home income for all housing costs. Still, that could be much too high for some families or less than others would elect to pay.

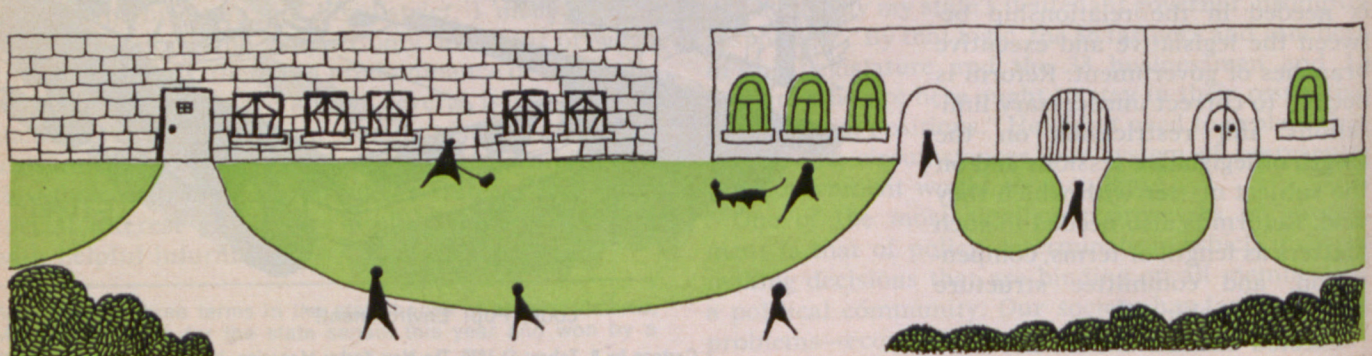
Thus far, I've provided no pat solutions or neat answers to some basic questions . . . and you won't fare any better with the next important question. Is this a good time to buy? No one really knows. The common wisdom today in housing circles, including that of mortgage lenders and government economists, amounts to something like the following:

We can expect mortgage interest rates to drop from current levels (8½ to 9½ percent on the average last fall). They will not be much lower, however, for quite some time, and any saving gained by waiting for mortgage interest rates to decline slightly may be (and probably will be) more than offset by further increases in costs of land, labor, and materials. Surely, the day of the 4½ and 5 percent home mortgage has gone forever. On the other hand, housing experts don't have all that good a record for predicting how interest rates will go. For instance, none of them would have guessed two or three years ago that interest rates would climb as high as they have.

Further, you might well be suspicious of a "common wisdom" of an industry when the result is self-serving. "Don't wait," they tell you, "buy now." And they add, "Continuing inflation will force home prices and rents higher and higher."

Most certainly inflation will continue. Polls show that most people think inflation is not necessary—that good government could stop it. Government officials always hint they have just about licked inflation. Your best hope is that the rate can soon be brought down to a 4 percent gain a year. That, in turn, translates into almost a 50 percent inflation over 10 years.

As for inflation's recent effect on housing, the Consumer Price Index shows a steep climb in the shelter component. A close look at the shelter factor reveals interesting data on rents and homeownership. The index for rents as of last August had risen to 124.2 (up from 119.3 a year earlier). The homeowner-



ship index had soared from 141.3 to 156.2 in the same year. Thus rents rose much more slowly than home buying costs from August 1969 to August 1970. (Indeed this has been the case ever since the base period 1957-59.) This raises the question of whether it makes more sense to buy rather than rent, strictly from the aspect of personal finance.

Most Americans, owners and renters alike, assume that owning a house makes more financial sense than renting. Not necessarily so. Some families who can buy should not, even though rent is like "money down the drain" and though renters cannot, like owners, deduct some of their payments on their income tax returns.

Homeowners tend to overrate their profits. Take the case of someone who buys a $25,000 house by making a $5,000 down payment and getting a 25-year, 8 percent mortgage loan. Assume he makes no improvements over five years and then sells through a broker for $32,000. The results thrill him: After paying a 6 percent, $1,900 sales commission, he finds he has all of $12,600 to play with! This includes his $5,100 profit, the $5,000 down payment, and $2,500 returned for having paid off that much toward reduction of the principal amount of his loan. He figures he won't have to pay an income tax on the $5,100, because the IRS doesn't collect it if he buys another house soon.

Sounds pretty good. Yet he actually received $1,900 less than his house is worth at today's prices. He must pay at least $32,000 to live as well as before; his $2,500 "found money" of repaid principal represents "forced" savings, not profits; and he received no income on the $5,000 tied up in his house for five years.

Most important of all, that owner has now almost certainly committed himself to homeownership for the rest of his life. He's hooked by our tax laws, which favor property owners in subtle ways. This tax treatment underlies a great deal of the strength and continued appreciation of values in the residential market. Homeowners buy again as soon as they sell to "avoid" paying income taxes on ever-increasing profits. This is especially true during and after inflation spurts.

Some owners believe they can avoid paying a capital gains or income tax from the profit on a home sale if they buy a higher priced home within a year (or 18 months if it's one they build). They would be wise to substitute the word *postpone* for *avoid*. Further, a family that makes a profit of say $3,000 on each of a series of four houses, will eventually owe taxes on $12,000 of gain—not only on the final $3,000 profit. Chickens come home to roost.

But some may question this, vaguely recalling that housing tax regulations exempt sellers age 65 and older. This is not always so. True, the tax will be lower for elderly sellers, but they will owe no taxes on profits *only* if the net sales price (after fees, fix-up costs) is $20,000 or less. They can truly avoid the tax if they pass the house on to heirs upon death, however.

The key to ownership profits—be they real or paper—lies in our income tax provisions. For more on this, obtain IRS's 15¢ pamphlet, "Tax Information on Selling Your Home," from Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

I assume that teachers and educators have a good general knowledge about buying and renting. Nearly 62 percent of public school teachers own their homes—the same as for the population as a whole. Studies show that most public school teachers have children, that many commute to work, and that about one-third are in the 30-45 age group from which most first-time home buyers come. Also, real income for teachers has increased in recent years.

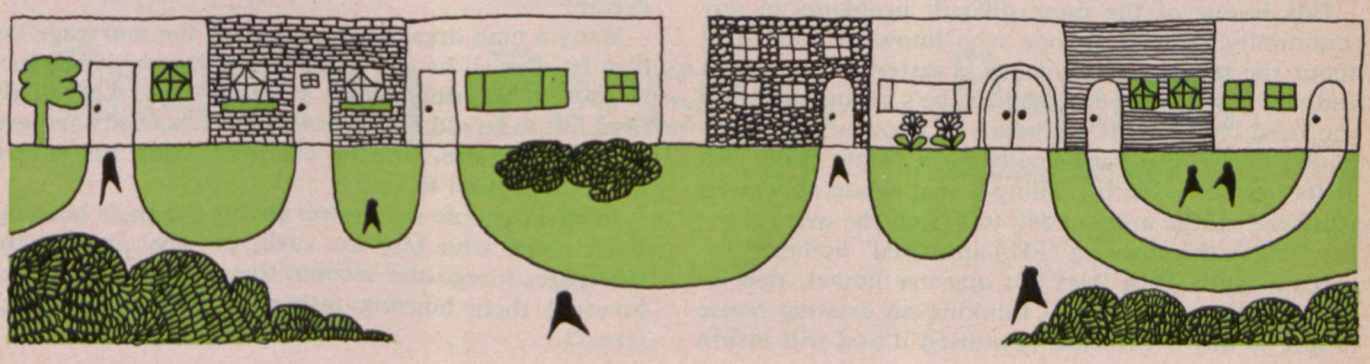
Local housing markets differ but you undoubtedly understand the general housing situation in your community and your buying opportunities. To help fill you in on current housing news that might affect your plans, I will describe some new housing financing programs and comment on several oft-heard questions:

• Can home buyers and apartment renters obtain federal aid?

Many young teachers who could not ordinarily afford to buy homes can now buy well-built new houses under the government program to help lower-income families. Buyers pay at least 20 percent of their incomes to meet monthly mortgage payments. This is usually enough to cover what is due on the principal but often covers only 1 or 2 percent of the 8½ percent for interest. The government pays the difference, and the buyers never have to repay this assistance.

To qualify, a family must have an income no more than 35 percent above the income limit of families who qualify for public housing in the community. Local income ceilings differ widely and according to the number of persons in the family.

This program enables many young marrieds to buy houses with as little as $200 cash to start and to continue to own them in later years when they can afford



to pay the full interest rate as well as principal.

Other teachers in the same below-average income group can also now rent apartments under a matching federal program of interest subsidies. In both programs, private industry builds and finances the houses and apartments, which look like any others you see.

Last summer Congress enacted another program to aid those a little farther up the income ladder. This program authorizes subsidies to help moderate-income buyers obtain 7 percent mortgages. When funded, it will help up to 280,000 families a year over the next three years.

As this article is written, legislation pends in Congress to authorize record amounts of funds for all housing subsidy programs. As many as half of all U.S. families may now qualify by income to obtain subsidies for decent housing, on terms they can afford. The programs apply to rental units and to the purchase of new, existing, and rehabilitated houses. In 1971, the subsidies will make possible about one out of three of all U.S. housing starts.

[If you would like more details about these programs, you may obtain pamphlets from local HUD and FHA (Federal Housing Administration) offices in your state or from the Service Center, Room B-258, HUD, Washington, DC 20410.]

If you reside in a small town (or would like to), you may be able to obtain the same subsidized housing assistance that HUD-FHA offers by applying at the county office of Farmers Home Administration of the Department of Agriculture.

• What is the cost of mortgage interest?

The interest, per $1,000 of principal borrowed, is:

Rate	20-year	30-year
6 percent	$ 719.43	$1,158.38
7½ percent	933.42	1,517.17
9 percent	1,159.34	1,896.64

• What is the relative cost of custom-built vs. tract-built houses?

You will pay more for a custom-built house, per square foot or any other way you figure it. Tract developers generally can buy land and materials more cheaply, use labor more efficiently, follow more advanced building methods, and obtain better mortgage terms than small builders. Many tract builders also offer better designs because they can afford to use excellent architects.

• Where can one get good advice on the housing market?

This is one of the most difficult problems in any community. Almost anyone who knows a good deal about the housing market has a vested interest in it and may try to sell you whatever he's selling, whether you need it or not. If you want to know about a particular house, you can usually get a pretty good idea of its market value by calling a real estate appraiser, who will charge a fee of $40 to $75 on the average.

• What's the story on "FHA-approved" homes?

It's a myth. FHA does not *approve* homes, new or old. Don't be misled into thinking an existing house is safe to buy if FHA has appraised it and will insure a mortgage on it. FHA appraises a house (only at a lender's request) to find out what its value is likely to be in the neighborhood. If the furnace conks out the day you move in, you're going to be stuck as well as cold.

As for new houses, FHA mortgage insurance assures that FHA will inspect the construction at three stages to make certain the house conforms to original plans. These inspections do offer some consumer protection, and FHA's "minimum property standards" have become a kind of Bible for builders. Over the years, these standards for building materials and methods, room size, utility services, neighborhood amenities, and so on, have set criteria all builders should meet.

• What about mobile homes?

If you don't like mobile homes because of their looks, or for other reasons don't want them in your area, thank your lucky stars for them, anyway. If more than 2 million had not been built in the last 10 years for nearly 6 million Americans, our growing national housing shortage would be almost unbearable. Rents and home prices would be higher by far; we would all be worse off.

Surveys indicate that most people in modern mobile home parks enjoy living there. However, complaints have increased as park owners tighten up their rules and boost rents when available spaces become scarcer. Interest rates on most mobile home loans run at 13 to 14 percent or higher, and value depreciates about 10 percent a year.

• Do home values drop in "open neighborhoods"?

Studies of home prices before and after minority families move into former all-white neighborhoods overwhelmingly disprove fears that values decline for white owners. Only those who panic and sell quickly at below-market prices appear to lose. Their houses later sell at prices at least as high as before. As times change, buying a home in an all-white area for economic reasons makes less and less sense.

Discrimination in selling homes has been outlawed almost entirely. In no legal way can a seller discriminate against a buyer solely because of race. Nor can a seller discriminate if he uses a broker or advertises in newspapers, on signs, or even by word of mouth.

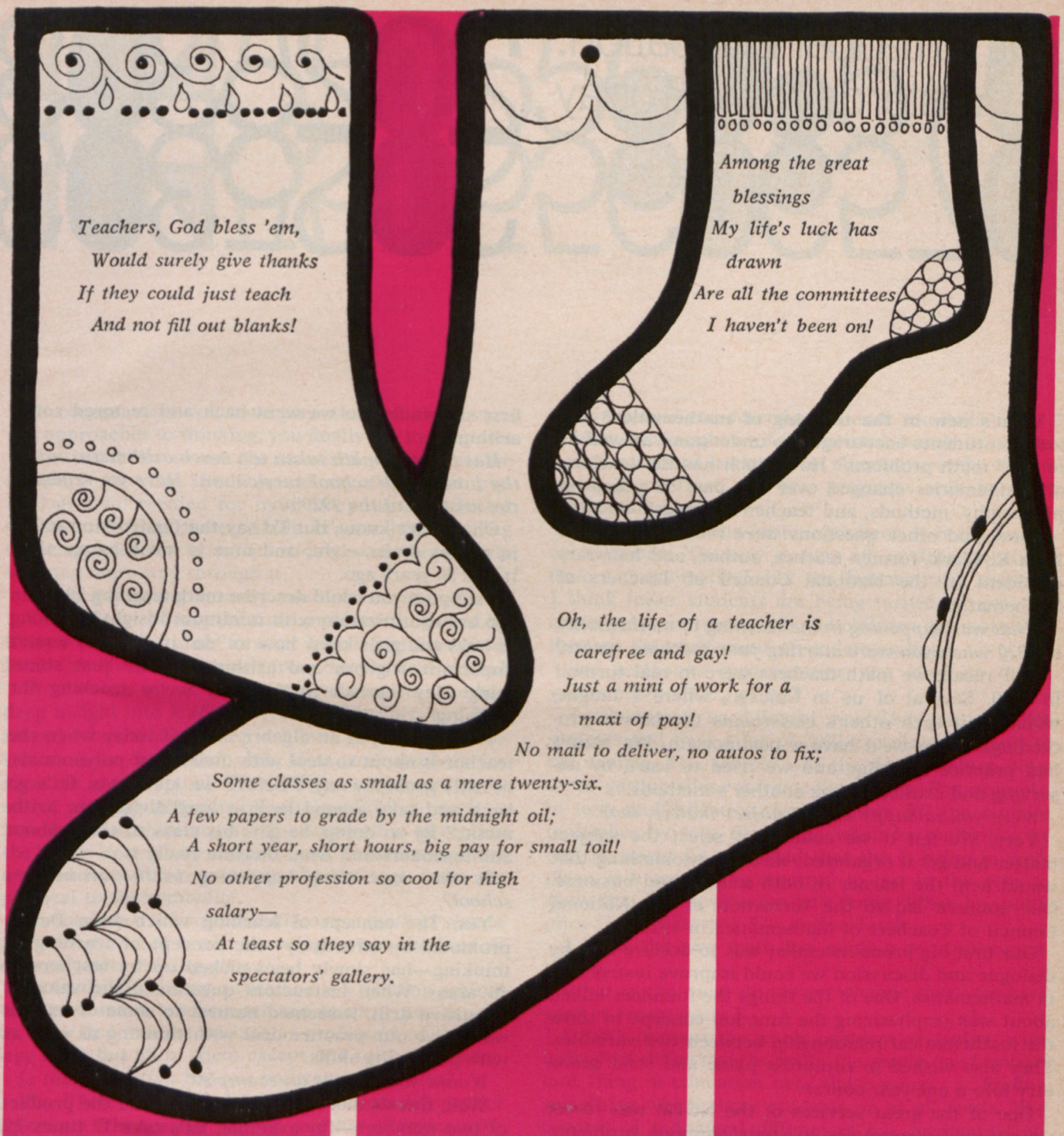
• Is buying land for later use a good idea?

This might be a losing cause. One real estate investment counselor says urban raw land is increasing about 6 percent in value a year while the money to pay for it costs the average buyer 9 percent a year.

• Is "owning a home free and clear" a worthwhile dream?

Many a man dreams of paying off the mortgage before he dies so he can leave his widow with no debt to pay off monthly. Many a widow has accordingly been left in an old house too big for her needs, in need of costly repairs, bearing ever-increasing tax assessments, and hard to sell.

In effect people never stop paying for their housing. Even those who buy for cash, or who pay off the mortgage, forego the income they could have if they invested their housing money elsewhere. Nothing's free. □



Stocking-Present Poems

S. OMAR BARKER

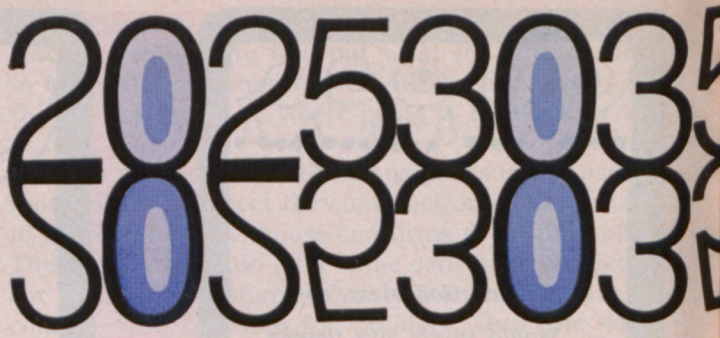
Teachers, God bless 'em,
Would surely give thanks
If they could just teach
And not fill out blanks!

Among the great
blessings
My life's luck has
drawn
Are all the committees
I haven't been on!

Oh, the life of a teacher is
carefree and gay!
Just a mini of work for a
maxi of pay!
No mail to deliver, no autos to fix;
Some classes as small as a mere twenty-six.
A few papers to grade by the midnight oil;
A short year, short hours, big pay for small toil!
No other profession so cool for high
salary—
At least so they say in the
spectators' gallery.

LIGHT TOUCH

Mathematical Education: Yesterday and Today



☐ **What's new in the teaching of mathematics? Are** today's students encouraged to understand as well as to "do" math problems? How much has the teaching of mathematics changed over the past 50 years—in philosophy, methods, and teacher attitudes?

These and other questions were recently posed to **John R. Clark,** former teacher, author, and honorary president of the National Council of Teachers of Mathematics.

What was happening in the teaching of mathematics in 1920 when you were starting your teaching career?

As I recall, we math teachers were in real turmoil in 1920. Several of us in Chicago, where I taught, would visit each other's classrooms to observe proceedings. Then we'd have a postmortem. We hadn't had practice teaching, and we tried to learn by observing and criticizing one another's methods.

Were you unhappy about subject matter, too?

Very. We felt if we could just select the subject matter and get it organized, we'd have something that would help the learner in both science and business. Our concern led to the formation of the National Council of Teachers of Mathematics in 1920.

Our first big pronouncement was to declare that by dialogue and discussion we could improve instruction in mathematics. One of the things the founders talked about was emphasizing the function concept to show the mathematical relationship between two variables. They also wished to compress plane and solid geometry into a one-year course.

One of the great services of the NCTM was to set up national committees to study common problems. Our national committee on the junior high school also deplored the shallow content taught in grades seven, eight, and nine. We proposed replacing conventional arithmetic with intuitive geometry and a more generalized mathematics. But we were disappointed in the results. Before long, we discovered that children had not achieved needed mastery of arithmetic in the first six grades, so we went back and restored some arithmetic.

Has the new math taken too much arithmetic out of the junior high school curriculum? Have we repeated the mistake of the 1920's?

Oh, I don't know, but I'd say that instruction today in grades seven, eight, and nine is much better than it was 50 years ago.

I suppose you could describe math teaching 50 years ago as "routinization with minimum insight." As long as boys and girls knew how to "do" it, the *why* wasn't important. Algebra and arithmetic were just something they learned to *do*. Now we're teaching for meaning.

For example, in an algebra class of today when the teacher is about to deal with division of polynomials, he will probably say, "Before we start this, let's go back and take a good look at long division in arithmetic." By so doing, he gets his class to think about and to understand what division really is.

Is the same thing happening in the elementary school?

Yes. The concept of learning which John Dewey promoted so effectively—the concept of learning as thinking—has slowly been picked up by teachers in all areas. When instructors questioned the value of repetitive drill, it seemed natural to some of us that we'd have our practice deal with thinking as well as with perfecting skills.

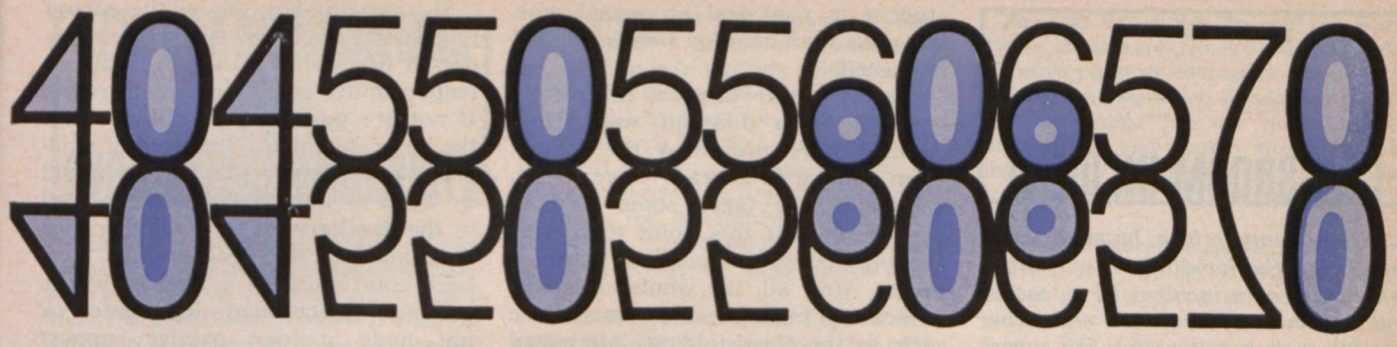
Would you give us an example?

Well, there's more than one way to find the product of two numbers—for example, let's take 12 times 25. One way is typified by the standard algorism. You write 25, the numeral 25, and below that 12. You know the rest of it—but a person who's acquainted with the psychology of teaching math wouldn't use that approach right away.

What would precede that?

At first, he'd have the pupils add twelve 25's. Then, some pupil would think, "I know what four 25's is—100. So twelve 25's would be 100 plus 100 plus 100." Later, under the stimulus of searching for new ways of thinking, another pupil might say, "Well, ten 25's is 250. If you add two more 25's or 50—the answer still comes out to 300, and that's right." And so on.

This manuscript was prepared in cooperation with Veryl Schult, research associate, U.S. Office of Education; and James D. Gates, executive secretary, National Council of Teachers of Mathematics. NCTM, an NEA national affiliate, is celebrating its fiftieth anniversary this year, and Miss Schult is chairman of the committee which planned special observance of the occasion.



Of course, after you have gone through these various approaches to thinking, you finally get to the point where it's faster to use the standard procedure—the standard algorism. So I would say that what psychology implemented for math does result in better understanding and better skills. It's not just listening or being told; it's being questioned and then slowly working one's way through it.

Is this happening in many math classes today?

Yes. At least I'd say the concept of learning used by today's teacher is close to what I have just described. I call this "freeing one's self from the physical world."

Froebel was one of the great psychologists who had deep insight into learning. Froebel, Herbart, and Pestalozzi—that whole group realized that math is abstract. It is concerned with ideas and symbols for ideas. It is conceptual. These ideas or concepts grow out of working with sets or groups of things, such as pencils, discs, children, etc. The learner has to replace the things by symbols and concepts. The learning must proceed from the concrete to the abstract, from the physical to the symbolic.

Do you think the so-called discovery method should get a good deal of credit for bringing out the kind of change you're talking about?

Certainly. The discovery method is a reaction against telling; so many teachers tell too much. I was taught by some fine mathematicians as professors at the college level, but all of them except one told everything.

Is that exception the one you remember best?

Yes. There were six of us in a class on differential equations. The teacher handed us a list of topics with these directions: "See what you can do with this. We'll meet next week and if you have questions, we'll think about them together." That was the most exciting course I had in college. By the way, he accepted our solutions with the comment that there is no single way to do things. Use of this "no one way" approach leads to increased motivation and involvement.

The subject matter has been vastly improved too. The mathematics courses I had as a pupil weren't intended to give me any real insight into the nature of our numeration and number system. The teacher didn't have that insight and the textbook didn't teach it.

How would you describe the math you had?

Math was taught as if it consisted merely of a number of standard patterns, or algorisms, to be memorized. In contrast, the new programs seek to make mathematics rational.

In my opinion the basic ingredient of being turned *on* is success. The way to turn *off*, or drop out, is to have a mathematical diet the learner can't manage. I think fewer students are being turned off now because goals are reasonable and children are motivated through the excitement of understanding.

Are textbooks incorporating the kind of things you've been talking about?

Textbooks are so different now. They used to offer samples and then a lot of drill exercises identical to the sample. The sample was the final product. Now we're getting those intermediate steps. For example, in long multiplication, say 14 times 57, the student multiplies by four first, then when he multiplies by one, he might be reminded that the 1, being in ten's place, is a ten. He is required to put in the zero to show that he knows what he's doing. When he multiplies 57 by 10 he gets 570, and so forth.

I think the new math has made a positive contribution.

What is the most important change that you have seen in recent years?

I think perhaps the whole problem of dealing with individual differences is really the single most important thing in education over these years . . . finding something which turns students on at all levels. The concept of individual differences has profoundly affected our thinking about curriculum—especially our realization that the attitude a child has toward his school and toward himself is significantly determined by his success in school.

Would you care to make a prediction about future development in mathematics education?

Change is so characteristic of our culture that prediction is hazardous. But, I predict that the mathematician, the psychologist, the sociologist, and the classroom teacher will come to cooperate more effectively in designing and implementing school curriculums that do a better job of meeting the needs of society and the capacities of the learners. □

CLASSROOM INCIDENT

This is another in a JOURNAL *series presenting the handling of a troublesome classroom incident by a teacher and analyses by teachers and other consultants whose training and experience may enable them to contribute illuminating insights. This month we also present the reaction of a high school student and will continue to do so from time to time.*

A few years ago I was the speech teacher in an isolated town in a southwestern state. One day I asked each student to prepare to read aloud a selection of his own choosing. The reading was in progress when trouble started.

One boy in my class was quite "a big man on campus," both literally and figuratively. I had heard about the terrorist methods he used on young teachers, some of whom were scared to death of him. We had scarcely begun the assignment when this boy stood up and announced: "I'm tired of reading every day. Let's do something different." I replied that since every student had not had a chance to read, we would complete the assignment as scheduled. "I don't know about that!" he shouted, his voice full of anger.

Since I am only a little over five feet tall, I knew that if this student should decide to use physical violence against me I'd crumble. But I gritted my teeth and said: "Since I am the person responsible for the class, we will proceed with the reading." At this, the boy stood up and started slowly toward my desk.

I was petrified but I stood my ground, waiting for I knew not what. He came steadily forward until he was "toe to toe" with me. He didn't speak; neither did I. The class sat in stunned silence.

My intuition told me he'd probably retreat after a few seconds. But suddenly I felt less and less sure this would be the case. As tension mounted, the door opened and in walked another teacher—a man. He had come to pick up the books I'd promised to loan him. The man gave my student a sharp look; the spell was broken. The boy shuffled his feet and started back to his desk, muttering, "I'm still tired of reading." When the door closed behind my colleague, I called on another student to read and proceeded with the class as if nothing untoward had happened.

Should I have handled this whole situation in a different way? How could I have prevented the matter from coming to a head? Once it did, should I have taken some kind of action, since at this point there was certainly no way to keep the matter a secret. After all, the whole class witnessed the incident, and some of the girls in the class told me afterward that they were sure the boy was going to hit me.

All in all, I have yet to find a good answer to the question implicit in this episode: What should a woman teacher do when a student threatens her authority with physical force, especially when she can't depend on being "rescued" as I was in this instance?

Consultants' Comments

Words reflect only the outer aspects of a student's personality. Was information available through the principal or school counselor that might have given the teacher insight and perspective about this boy? Had any of the faculty succeeded in reaching him? If not, perhaps the teacher could have found her own way to establishing a positive relationship with him instead of keeping her distance and putting off making her own assessment.

Was the "big man on campus" afraid he'd not show up well reading aloud? Hostility (anger) is so often based on fears about one's adequacy.

With more background, the teacher might have avoided a confrontation.

—**Doris E. Foster,** *former school social worker, Doniphan, Nebraska.*

Both teachers and students confuse the teacher's role as an authority and as an authoritarian.

I mean this in the sense that authority stems from character or knowledge or respect born of esteem; authoritarians base their status on the sanctions which give power.

No successful teacher will fall altogether in either category, nor should he, but it seems that the teacher in this case relied too heavily on the latter. Our young teacher, it appears had anticipated the boy's use of "terrorist methods" but had relied upon a rather vague intuition that when the crisis came she would be able to face him down. What a frightening situation—to stand alone confronted by the boy's threat with no confidence that she had the effective support of the other students!

She tells the boy she is "the person responsible for the class." One wonders if her students have ever shared responsibility for their own learning. If not, it's possible—even likely—that the boy's statement "I'm tired of reading" was expression of a feeling shared by most of the class. Failing to lead in the development of a collaborative environment, the teacher has now been confronted by a student whose personal resentment—legitimate or not—finds at least passive support from his classmates.

Why is the teacher alone? I suggest she ask her class. The very act of asking might help prevent a recurrence of the incident.

—**Stewart Doig,** *teacher of social studies, Wheatley School, East Williston School District, Nassau County, New York.*

I agree that the move which the boy made had what appeared to be violent overtones. Yet not once did the boy indicate by word or action that he would physically harm the teacher. Perhaps the teacher panicked because of the boy's reputation.

In my opinion, a woman teacher has only one course of action when threatened by a student: to call his bluff. In this case if she had firmly said, "John, sit down and be quiet," the boy's bluff might have been called. Under no circumstances should she take physical action or turn and run. Trying to call his bluff seems to be the only reasonable way to deal with such a confrontation.

—**Katy Akins,** *senior, Topeka (Kansas) West High School.*

"Oh, my teacher and I communicate, all right . . . she looks at me a certain way and I understand what I'd better do!"

NEW NEA PUBLICATIONS & AUDIOVISUAL MATERIALS

This listing is designed to keep you informed of the newest professional materials published by the NEA and its affiliates. Please use stock numbers when ordering. N.D. means no discount on quantity orders of the same title.

Basketball Rules Reprint (#1). 172 pp. 35¢. 243-07306. American Association for Health, Physical Education, and Recreation.

Blockbuilding (#2). Esther B. Starks. Examines the ways in which this activity contributes to the child's development at preprimary and primary levels through text, diagrams, and pictures. Revised edition. 32 pp. $1. 281-08632. (Special price for a single copy for E/K/N/E members only. 75¢. N.D. 281-08754.) American Association of Elementary-Kindergarten-Nursery Educators.

Clothing for Young Men (#3). Dorothy S. Lyle. Focuses on fashion trends, selection and care of clothing, information on new textiles, and community resources available to the teacher. 32 pp. $2.50. 261-08302. Home Economics Education Association.

Current Research in Early Childhood Education: A Compilation and Analysis for Program Planners (#4). Annie L. Butler. Research Review. Analyzes more than 250 reports and research studies that provide a basis for planning programs for three- through five-year-olds. 200 pp. $5. 281-08688. (Special price for a single copy for E/K/N/E members only. $4.50. N.D. 281-08692.) E/K/N/E.

DGWS Field Hockey-Lacrosse Guide 1970-72 (#5). 24 pp. $1.25. 243-07310. AAHPER.

DGWS Tennis-Badminton Selected Articles (#6). 128 pp. $1.25. 243-06894. AAHPER.

Educating the Young People of the World (#7). Alice Miel and Louise Berman, editors. A report of the World Conference on Education. 144 pp. $2.50. 611-17506. Association for Supervision and Curriculum Development.

The Evaluatee Evaluates the Evaluator (#8). ERS Circular No. 5, 1970. Reports procedures and reproduces forms used in some local systems for the evaluation of teachers by students, principals by teachers, and central office staff by principals. (An $80 ERS subscription includes one copy of each Circular published.) 52 pp. $1.50. 219-21488. Educational Research Service.

Experiences in Mathematical Ideas (#9). Volume I. Arnold M. Chandler, editor. Aims to help teachers stimulate slow learners in grades 5-8. Combines a profusely illustrated text for teacher use with an associated Teaching Package of 131 loose-leaf sheets to be duplicated for student worksheets, overhead transparencies, or props for laboratory-oriented activities. 209 pp. $20. 301-09424. National Council for Teachers of Mathematics.

Guide to Excellence for Physical Education in Colleges and Universities (#10). A position paper. 12 pp. 50¢. 245-07022. AAHPER.

Guidelines for Secondary School Physical Education (#11). A position paper. 12 pp. 50¢. 245-07014. AAHPER.

The High School Mathematics Library (#12). William L. Schaaf, editor. Updates an annotated bibliography first published in 1960. Covers the principal areas of today's high school mathematics in over 800 entries, which are classified by topics. Contains information useful for mathematics clubs, contests, exhibits, projects, enrichment, guidance, and independent study. 96 pp. $1.75. 301-09428. NCTM.

Index to NEA Research Division Publications Currently Available (#13). Research Memo 1970-18. 26 pp. 70¢. 431-22936. Research Division.

Man, Education, and Manpower (#14). Grant Venn. Suggests ways that our schools can prevent human failure and develop human resources. 281 pp. $6. 021-00334. American Association of School Administrators.

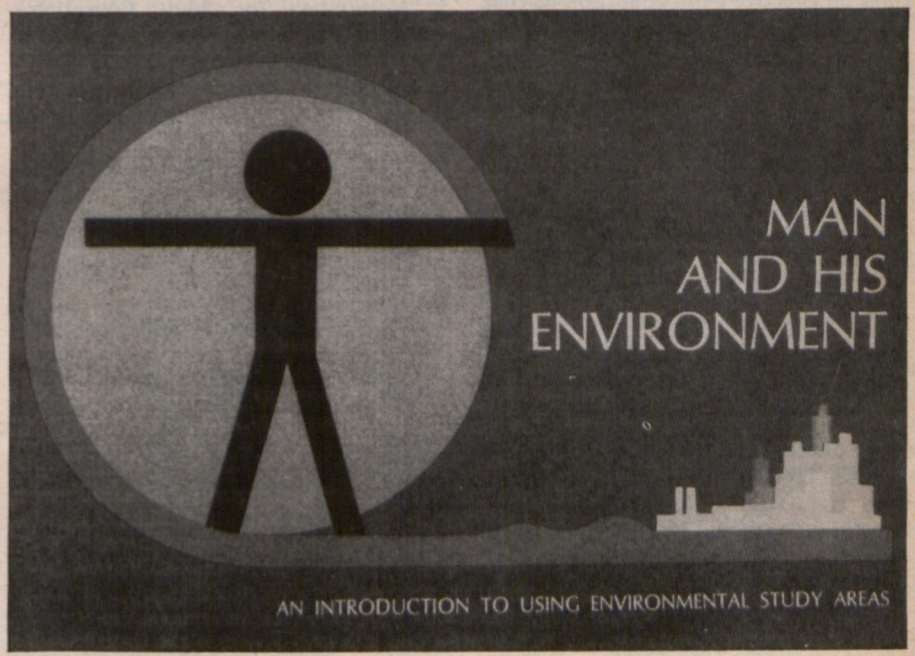
Physical Education Around the World (#15). Monograph No. 4. Deals with comparative physical education. One of a series of monographs developed by Phi Epsilon Kappa for use in workshops, practicums, and course work. Includes information about programs in 32 countries. 72 pp. $1.50. N.D. 248-25112. AAHPER.

Physical Education for High School Students (#16). William H. Savage, editor. Serves as a textbook as well as a supplementary reader for boys and girls in grades 7-12. Concentrates on a different sport and recreational activity in each chapter. Examination copy available on request with a 30-day return privilege. 1970 edition. 400 pp. Cloth, $5, 245-25116; paper, $4, 245-25114. AAHPER.

Preschool Breakthrough: What Works in Early Childhood Education (#17). Shows school personnel how to prepare for preschoolers headed their way. Includes a review of new philosophies and old controversies of early childhood education, research results, a guide to the federal apparatus that has sparked innovative techniques, clues to ferment in state and local communities, and detailed descriptions of projects that have increased the achievement of young children. 48 pp. $4. 411-12774. National School Public Relations Association.

Problems and Opportunities Challenging Women Today (#18). Fall 1970 issue of the *Journal of NAWDC*. 48 pp. $2. 596-17068. National Association of Women Deans and Counselors.

Requirements for Horizontal Advancement on Teachers' Salary Schedules,



Man and His Environment (first announced in the October issue) sets forth a step-by-step environmental learning program. See "After All" on page 64 of this issue for information on ordering. A filmstrip based on the booklet is now in preparation.

1969-70 (#19). Research Memo 1970-17. Gives types of credits acceptable in 361 school systems enrolling 6,000 or more pupils. 18 pp. 50¢. 431-22932. Research Division.

Salaries in Higher Education, 1969-70 (#20). Research Report 1970-R6. Gives the salaries paid to faculty by rank and type of institution, and to administrators by position for both two-year and four-year institutions of higher learning. Includes data for summer sessions and salary-related policies. 95 pp. $1.50. 435-22930. Research Division.

Salary Schedule Provisions for School Nurses, 1969-70 (#21). Research Memo 1970-15. Gives minimum and maximum scheduled salaries by level of preparation in systems enrolling 6,000 or more pupils. 6 pp. 20¢. 431-22926. Research Division.

Salary Schedules for Principals, 1969-70 (#22). Research Report 1970-R5. Gives type of schedule and minimum and maximum salaries and number and average amount of increments for school systems enrolling 12,000 or more pupils. Includes brief text and summary tables. 82 pp. $1.50. 435-22928. Research Division.

The School Board Meeting (#23). An *Education U.S.A.* Management and Policy Report. Describes meeting procedures and approaches used by school boards in both large and small districts. Covers seating arrangements, do's and don'ts on handling the media, and the importance of the meeting's physical location. 48 pp. $4. 411-12770. NSPRA.

Second Treasury of Techniques for Teaching Adults (#24). Tells how to become an effective adult education teacher. 50 pp. $2. 751-01380. National Association for Public Continuing and Adult Education.

The titles listed below were announced for the first time in last month's special NEA Publications discount feature. See the coupon in the November issue on page 72 for your convenience in ordering.

NEA Handbook for Local, State, and National Associations, 1970-71 (PR1).

Readings in Geometry from the "Arithmetic Teacher" (SA12).

The Self-Selection Classroom (#25). Zilpha W. Billings. Describes a different individualized approach to learning; explains philosophy, techniques, and use of teaching materials. 4 pp. 25¢. 282-08882. E/K/N/E.

Sports Programs for College Women (#26). Presents national conference papers on ethics, values, role of sports, present problems, and future directions. 96 pp. $2.50. 243-25124. AAHPER.

Staff Salaries, State Departments of Education, 1969-70 (#27). Research Report 1970-R7. Summarizes, in tabular form, salary distributions, means, medians, quartiles, and ranges of salaries paid for major functions. Gives titles and salaries for each major function and special service by state. 61 pp. $1.50. 435-22934. Research Division.

Teacher Strikes, Work Stoppages, and Interruptions of Service, 1969-70 (#28). Research Memo 1970-19. Reviews activity during past decade. Gives numbers of strikes, personnel involved, and man-days lost—by state, by type of organization, and by month for the school year 1969-70. Lists school systems experiencing strikes by date. 13 pp. 40¢. 431-22938. Research Division.

The Teaching of Secondary School Mathematics (#29). 33rd Yearbook. Describes forces shaping today's mathematics program in Part 1; analyzes the art of generating interest before discussing teaching for special outcomes in Part 2; and demonstrates classroom applications, with emphasis on teacher planning in Part 3. 448 pp. $7.50. 300-09420. NCTM.

FREE MATERIALS

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DuShane Fund: For Action Now. Leaflet. Describes the concerns, operations, and procedures of the Fund, including typical cases and how to apply for assistance. 901-25690. DuShane Emergency Fund.

Negotiation for Adult Education. Leaflet. Explains why a local association should negotiate for adult education, what a local can do through negotiation, and what the negotiation package should say about adult education. Also describes how a local can get started and how the NEA can help. Adult Education Service.

Protecting the Profession's Interest in Ethical Conduct. Analyzes problems faced by local associations in implementing ethical standards and proposes approaches to their resolution. 64 pp. 201-06058. Committee on Professional Ethics.

A Story of People. 1970 NSPRA Annual Report. 16 pp. NSPRA.

ORDER FORM

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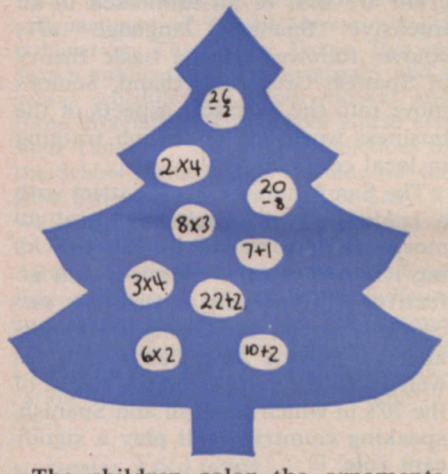
TODAY'S EDUCATION *will pay $5 for each item used in "Idea Exchange" that has been prepared and submitted by an NEA member and that has not been published previously in a periodical having state or national distribution. (Please include your home address as well as your school, position, and ZIP Code.)*

Mathematical Ornaments

At Christmas time, I give children in my class paper trees decorated with sets of white paper ornaments on which I have written arithmetic combinations.



The children color the ornaments according to the answers to the combination: pink for 24, yellow for 12, and orange for 8. They enjoy this activity.

—Barbara Conrady, *third grade teacher, Washington School, Santa Monica, California.*

The Brother's Keeper Problem

I introduce the idea of the "Brother's Keeper Problem" to my School Mathematics Study Group classes with these words:

Am I my brother's keeper? I am not about to try to settle this age-old question; nevertheless, I do maintain that there are times in life when our actions as individuals have a direct bearing on the welfare of others.

I explain that each Wednesday the class will have to solve a Brother's Keeper Problem and that if *everyone* solves the mathematical problem correctly, I will add five points to the last test grade of every member of the class. If *one* person has an incorrect answer, I will deduct five points from the last test grades. (At first I may get cries of "unfair," but I tell the students that when one member of a football team goes offside, the entire team is penalized. They see the point.)

At the first of each week, I tell the group what *type* of problem their Brother's Keeper Problem will be for the coming Wednesday. When that day arrives, it is fascinating to watch the interaction before the quiz. Each of the slower members of the class will have a small group of the better students surrounding him and making sure that he clearly understands the type of problem he will have to solve.

On the days that the students are 100 percent successful, there is a moment of unbounded joy. When they fail, there seems to be a resolve that it won't happen again.

—Frank Stevenson, Jr., *mathematics teacher, Reading (Pennsylvania) Senior High School.*

Bounce a Fact

My third graders learn their arithmetic facts and increase their speed by playing a game that I call Bounce a Fact. The children divide into teams. I call out a combination and then bounce a ball to the first person in the line. He calls out the answer and returns the ball to me. If his answer is correct, his team scores a point. He then goes to the end of his line and I give a combination to the next team.

When we first play the game, the children may hold the ball for five seconds before they must return it to me. As their speed in answering increases, I give them less time in which to answer.

—Patricia A. Dworzack, *third grade teacher, J. T. McWilliams School, Las Vegas, presently on leave of absence.*

Give Everyone in the Room a Chance To Sit Up Front

Since most children in the first three grades want to sit in the first row, I experimented until I found that the following method of assigning seats was the most satisfactory:

I tell my pupils on the first day of school that everyone, in time, will sit in the first row. I then alphabetize pupil names and start seating A's in the first row, as far as they go; the B's come next, and so on.

During the last period each Friday, I have each row of students move up one row. The first row moves to the rear. When the children change seats, they also clean out their desks—and I clean out mine.

The results? We are always organized to start the week on Monday and everyone gets a first row seat sooner or later.

—La Verna Frymire, *second grade teacher, Hayden Lake (Idaho) School.*

Parts-of-Speech-Game

In trying to help my eighth and ninth grade students identify parts of speech, I discovered a most effective commercial game that consists of a number of short stories in which key words are omitted. The game requires the players to fill in the blanks with nouns, verbs, adjectives, adverbs, etc., without knowing how they will fit into the story. The results can be quite humorous.

As students become more practiced and no longer have trouble distinguishing between nouns and verbs, the teacher can introduce a variation in which he asks for specific forms of words. For example, he might ask for a verb in the present tense, active voice, progressive form, third person plural.

Not only has this game improved my students' abilities to identify parts of speech, but it has also been good for increasing their vocabularies. Several students have begun keeping lists (on their own initiative) of words they have encountered in their reading or have heard and that they think would be interesting words to use in the game. They soon grew tired of using "nice," "slowly," and other overworked words.

Not the least value of this game is that the students seem to really enjoy it and actually look forward to having a few minutes at the end of a period to work on parts of speech.

—William U. Albright, Jr., *teacher of eighth grade language arts and social studies, Philo Junior High School, Winston-Salem, North Carolina.*

Guest Expert

An excellent method of stimulating the desire for academic excellence in students is to have them volunteer (or select them at random) to assume the role of "expert." Various students then ask the expert pertinent questions on the material we happen to be studying. He stands until he misses, and then another student becomes the expert.

—Don S. Allison, *social studies teacher, South Lake High School, St. Clair Shores, Michigan.*

dents was this: *The Mexican students knew the basic concepts necessary to function at school.*

Armando could read. In fact, because Spanish is a virtually phonetic language, he had probably learned to read and write at an earlier age than students in the United States. Consequently, he was able to acquire information from the printed page much earlier. All Armando had to do when he entered our school was to learn English. He could already read, and he could function very well in math and geography—even if he had to sit with his textbooks on one side of his desk and a small Spanish-English dictionary on the other. And, learn the language he did!

Director Gonzáles and the assistant superintendent, Paul Kantz, moved toward the attitude that being bilingual is an asset rather than a disadvantage. The superintendent of the San Antonio district, Harold Hitt, provided the ultimate impetus in this direction: In a memorandum to all principals, he urged that high priority be given to "the inauguration of a bilingual education program that accepts as its major goal the provision of opportunities for all graduates of high school in the district to become bilingual in Spanish and English."

Such a program became more feasible when ESEA was amended to provide grants specifically for bilingual education (Title VII). In 1969 San Antonio initiated three projects with Title VII funds.

The Multimedia Development project was designed to develop an effective package of integrated learning materials; animated color films, filmstrips, audiotapes, student worksheets, teacher guides, and other visual aids designed primarily for Mexican American kindergartners and first graders.

Initial development of this project was most unusual in that it represented the cooperative efforts of the San Antonio district and a commercial firm in researching and investigating areas of concern to ensure excellence in social studies content. It dealt more with the affective than with conceptual aspects of the subject.

Long before federal monies were available for special programs, Alonso Perales, then a Spanish teacher at Rhodes Junior School, had devised (with the cooperation of his principal and several fellow teachers), the Rhodes Project, which encompassed several subject areas in the Spanish language arts class in order to provide Mexican American students with further development of their home language. Instead of using Spanish textbooks, teachers tried to develop more relevant units via audio-lingual or adapted ESL techniques.

The favorable attitudes of students enrolled in this project and statistics which indicated that the sixth and seventh grades are critical dropout areas for students led to establishment (with some of the Title VII funds) of the Junior School Curriculum Development Project. Its design entailed a plan for identifying, developing, and adapting materials to help sixth and seventh graders become independent learners in both English and Spanish.

The initial task involved selection and training of 10 teacher-writers in techniques of audio-lingual inquiry-oriented curriculum development. Upon completion of orientation, this cadre of writers were expected to develop at least one unit for each six-week period in each of five subject areas—English language arts, Spanish language arts, science, math, and social studies. In adapting the materials into teaching units, the teachers used great care in retaining the conceptual content of each subject rather than watering it down, as many educators had previously felt was necessary.

Indeed, it was clear to the project personnel that, if anything, students needed a concentration rather than a dilution of conceptually developed materials. The answer lay in developing innovative methods and materials reflecting identifiable, realistic goals. The audio-lingual approach in language development proved so effective that the teachers decided to structure the content material of the units and provide for inquiry-oriented activities requiring active and positive student participation. For example, students had less trouble understanding the function of the microscope when the explanation was in Spanish. Reading materials, too, could deal with familiar topics.

The historical contributions of Mexican Americans and other ethnic groups are now featured areas in the seventh grade social studies course on Texas history, geography, and government. Sixth grade teachers present social science concepts to develop sensitivity to others—their differences and likenesses—via role playing, observing, and gathering of data.

Because the percent of high school graduates from local Spanish-speaking families is so small, some resources of the Title VII funds were directed toward development of an innovative high school project to prepare bilingual office workers. San Antonio's position in the Spanish-speaking world lends itself admirably to a project for training students with bilingual skills in typing, shorthand, basic language skills, and business communications. Several Latin American consulates, as well as transportation and commercial companies dealing with Latin America, offer a fertile field of employment for trained bilingual office personnel.

Many young people applying for these positions soon discover they lack the necessary skills. Under a project developed to operate in conjunction with the Texas Education Agency's Vocational Office Education Program, juniors entering the program are first of all immersed in an intensive Spanish language arts course, followed by the basic theory of Spanish Gregg shorthand. Seniors move into the practical aspects of the business world via on-the-job training in local companies.

The San Antonio school district with a traditional bilingual, bicultural atmosphere thus moves toward providing its students the cognitive and affective skills needed to function successfully in an increasingly complex and fast-moving American society, as well as in the ever-shrinking world of the 70's in which Spanish and Spanish-speaking countries will play a significant role. □

"Well, you let Artie Brown's dad outsmart you again."

NEA-Related National Groups

Under the heading for each group, publications sent to members are listed, followed by a statement of membership fees. The first person named is president and the second is secretary or executive secretary, unless otherwise indicated.

Send dues to the office or address indicated by an asterisk.

NEA DEPARTMENTS

American Driver and Traffic Safety Education Association—*Journal of Traffic Safety Education.* Dues: $15; student, $5. Henry A. Vaughan, administrator, Section of Safety and Driver Education, State Dept. of Education, 4545 N. Lincoln Blvd., Oklahoma City 73105. *Walter C. Lunsford, NEA.

Association of Classroom Teachers—*Official Report* (upon request). Any classroom teacher who is an NEA member is automatically a member of ACT. No separate dues. Donald F. Wilson, Hillside Junior High School, Seven Hills, OH (on leave, NEA). Margaret Stevenson, NEA.

Department of School Nurses—Official publication: *The School Nurse.* Two research publications (a bibliography and a salary schedule for school nurses) and three brochures, "The School Nurse and Your Family," "The Unique Functions of the School Nurse," and "A Guide for the New School Nurse." Dues: $15. Sally R. Williams, 13251 Safford St., Garden Grove, CA 92640. *Oreta O. Norris, NEA.

Rural Education Association—*Rural Education News, NEA Research Bulletin,* and other publications. Dues: $10. Thomas J. Quick, assistant superintendent, school administration, Ohio State Dept. of Education, Columbus. *Lewis R. Tamblyn, NEA.

NATIONAL AFFILIATES

American Association for Health, Physical Education, and Recreation—*Journal of Health-Physical Education-Recreation, Research Quarterly, School Health Review,* and *Update.* Dues: professional and associate, $25; alternate membership plans $30, $35, $40. Student, $10; alternate plans, $15, $20, $25. Laura Mae Brown, Webster Groves, MO. Carl A. Troester, Jr., NEA. *Gerald Newland, NEA.

American Association of Elementary-Kindergarten-Nursery Educators—Two study/action publications, quarterly news journal, and three newsletters. Dues: active and associate, $8.50; retired, $4.25; student, $4.25. Margaret S. Woods, associate professor, Seattle Pacific College, Seattle. Robert Gilstrap, NEA. *Lorene Baldwin, NEA.

American Industrial Arts Association—*Man/Society/Technology, A Journal of Industrial Arts Education; AIAA Monitor;* and *Scene.* Dues: $15; high school student (individual), $1; college student (individual), $5. Sherwin D. Powell, Colorado Springs, CO. *Edward Kabakjian, NEA.

National Higher Education Association—NEA's program for higher education is expressed through three organizations relating to specialized concerns. The National Society of Professors relates to the concerns of faculty members in four-year institutions, the National Faculty Association of Community and Junior Colleges plays the same role for faculty members in two-year institutions, while the National Association of College and University Administrators serves all administrators in higher education.

NEA campus chapters in higher education institutions provide focal points for professional advancement, economic welfare through professional negotiations, improvement of instruction, and the defense of academic freedom.

For further information contact one of the following persons at the NEA Center: Charles Bob Simpson, acting director, National Higher Education Association; Donald L. Keck, associate director, National Faculty Association of Community and Junior Colleges; Richard H. Le Francois, representative, National Society of Professors. NEA dues of $25 entitle members in higher education to belong to one of the three organizations. Publications are *NFA Reports* and *NSP Forum.*

Association for Educational Communications and Technology—*Audiovisual Instruction* and monthly newsletter. Dues: $20 (with *AV Communication Review,* $25); student, $8 (with *AVCR,* $12). Robert Gerletti, Division of Educational Media, Los Angeles County schools. *Howard Hitchens, Jr., NEA.

Association for Supervision and Curriculum Development—*Educational Leadership* and *Yearbook.* Dues: regular, $20; comprehensive membership (includes other publications for the period of membership), $30. John D. Greene, director of instruction, Baton Rouge public schools. *Fred T. Wilhelms, NEA.

Association of Teacher Educators—*Journal of Teacher Education, ATE Newsletter,* bulletins, and commission publications. Dues: basic, $20; comprehensive, $25; institutional, $25; life, $500 in one payment or 10 payments of $55; student, $7.50 plus sponsorship of ATE member. Mary Ellen Perkins, Georgia State Univ., Atlanta. *Richard E. Collier, NEA.

Home Economics Education Association—*Consumer Education* and *Evaluation.* Dues: $5; student, $2.50. Ruth Wheeler, 2753 Crawford Ave., Evanston, IL. *Pennie M. Strongoski, NEA.

Journalism Education Association—*Communication: Journalism Education Today* and annual report. Dues: regular, $10; associate, $10; institutional, library, or state, $15; life, $100; sustaining, $100. Bruce R. Minteer, Freeport (Illinois) Senior High School. Elwood Karwand, Wisconsin State Univ., Eau Claire. *Sister M. Rita Jeanne, FSPA, St. Rose Convent, 912 Market St., LaCrosse, WI 54601.

Music Educators National Conference—*Music Educators Journal.* Dues: $14 (plus dues in affiliated states). Frances M. Andrews, Music Education Dept., Pennsylvania State Univ., University Park. *Charles L. Gary, NEA.

National Art Education Association—*Art Education* and *NAEA Newsletter.* Dues: active, $15; comprehensive, $20; institutional, $25; associate, $9; supporting, $250; student (chapter) membership, $5. William Bealmer, Northern Illinois Univ., DeKalb. John E. Hammond, NEA. *Peggy O'Brien, NEA.

National Association for Public Continu-

Candidates' Campaign Expenditures

Campaign expenditures of 1970 candidates for NEA office that were reported to the NEA Board of Directors are herewith listed:

Don Morrison—$9,536.73
David E. Schulz—$6,765.86
Marvin Liberson—not reported
Nick Duff—$4,477.03
Wade Wilson—$2,902.97

A detailed report on expenditures is available from NEA Center.

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ing and Adult Education—*Pulse, Techniques, Swap Shop.* Dues: active, $20; associate, $5; subscribing, $20; institutional, $50. Monroe Neff, continuing education, New York State Education Dept., Albany. *James R. Dorland, NEA.

National Association of Educational Secretaries—*The National Educational Secretary.* Dues: $10; life, $125. Gloria Jirel, 1555 S.W. 35th St., Corvallis, OR. *Kathleen M. Meyer, NEA.

National Association of Elementary School Principals—*The National Elementary Principal* and special publications. Dues: $20; life, $400. Anna Rockhill, principal, Pine Avenue School, Bethpage, NY. William L. Pharis, NEA. *James E. Kovach, NEA.

National Council for the Social Studies—*Social Education* and *Yearbook.* Dues: subscribing, $12; comprehensive, $20 (also receive copy of each NCSS publication issued during year). John Jarolimek, Univ. of Washington, Seattle. *Merrill F. Hartshorn, NEA.

National Council of Administrative Women in Education—*NCAWE News* and other publications. Dues: active, $3; retired, $1.50; library plan, $2. Mathilda Gilles, 695 Court St. N.E., Salem, OR 97301. *Lois V. Rogers, NEA.

National Council of Teachers of Mathematics—*Mathematics Teacher, Arithmetic Teacher,* and *Newsletter.* Dues: regular, $9 (includes either journal) or $13 (includes both journals); student, $4.50 (includes either journal) or $6.50 (includes both journals). H. Vernon Price, Univ. of Iowa, Iowa City. *James D. Gates, NEA.

ASSOCIATED ORGANIZATIONS

American Association for Higher Education — *College and University Bulletin* and *The Troubled Campus* (1970 edition of *Current Issues in Higher Education*). Dues: regular, $25; life, $500; retired, $15; student, $15. Paul L. Dressel, director, Institutional Research, Michigan State Univ., East Lansing. *G. Kerry Smith, chief executive officer, AAHE, 1 Dupont Circle, Suite 780, Washington, DC 20036.

American Association of School Administrators—*Official Report, Roster of Members, Research Bulletin, School Administrator, Hot Line,* and books and pamphlets. Dues: $20. Harold H. Eibling, superintendent of schools, Columbus, OH. *Forrest E. Conner, NEA.

American Association of School Librarians — *School Libraries* and *American Libraries.* Dues: $25-125, individual, based on salary; institutional, based on budget. Roberta Young, director, Library Development, Office of Library Services, Colorado Dept. of Education, Denver. *Lu Ouida Vinson, executive secretary, AASL, ALA Headquarters, 50 E. Huron St., Chicago 60611.

Association for Educational Data Systems—*AEDS Journal* and *AEDS Monitor.* Dues: $15; institutional, $100; sustaining, $300; student, $5. L. Everett Yarbrough, State Dept. of Education, Tallahassee, FL. *Shirley Easterwood, NEA.

Council for Exceptional Children—*Exceptional Children* and *CEC Update.* Dues: $15; life, $350 in one payment or $40 per year for 10 consecutive years or two annual payments of $120 and one final payment of $110; retired, $5; student, $5. Samuel C. Ashcroft, professor, Dept. of Special Education, George Peabody College for Teachers, Nashville. William C. Geer, CEC Headquarters. *Jeffrey Levy, CEC, Suite 900, Jefferson Plaza One, 1411 S. Jefferson Davis Hwy., Arlington, VA 22202.

National Association of Secondary School Principals—*Bulletin, NASSP Spotlight,* and *NASSP News Letter.* Dues: $30; institutional, $40; student, $7. J. Frank Malone, Putnam City schools, Oklahoma City. *Owen B. Kiernan, NEA.

National Association of Women Deans and Counselors—*Journal* and occasional newsletter. Dues: $27; student, $5. Catherine M. Northrup, dean of women, Washington State Univ., Pullman 99163. *Anna Rankin Harris, NEA.

National Business Education Association — *Business Education Forum* and *Business Education Yearbook.* Dues: professional, $10; associate (libraries and schools), $15; student, $5; International Society, $3 additional. J. Curtis Hall, Virginia Commonwealth Univ., Richmond. *O. J. Byrnside, Jr., NEA.

National Retired Teachers Association—*NRTA Journal* and *NRTA Bulletin.* Dues: individual annual, $2; three-year membership, $5; life, $50. Katherine Pearce. Bernard E. Nash, executive director, NRTA, 1225 Connecticut Ave., Washington, DC 20036. *Geneva McNee, NRTA Membership, 701 N. Montgomery St., Ojai, CA 93023.

National School Public Relations Association—Handbooks, special reports. Newsletter subscription services: *Education U.S.A.,* weekly, $21; *It Starts in the Classroom,* monthly, $6; *Trends, the School Communications Newsletter,* monthly, $8. Membership, $15. Professional Communication Service, $40. John A. Gillean, director of public information, Los Angeles city schools. *Roy K. Wilson, NEA.

National Science Teachers Association—*The Science Teacher* (regular, life, and comprehensive); *Science and Children,* (elementary, life, and comprehensive); and *NSTA News-Bulletin.* Dues: regular, $10; comprehensive, $20; elementary, $5; life, $330 ($270 if paid in three years); college student, secondary education, $4; college student, elementary education, $2. Richard J. Merrill, Mt. Diablo Unified School District, Concord, CA. Robert H. Carleton. *John F. Crosson, NEA.

Speech Communication Association—*Quarterly Journal of Speech, Speech Monographs, Speech Teacher* and *Spectra.* Dues: regular, $15; sustaining, $40; student, $7.50. Donald C. Bryant, Univ. of Iowa. *William Work, SCA, Statler Hilton Hotel, New York 10001.

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Education à la Carte

□ **"Let's do it ourselves!" This suggestion followed** adamant complaints from my sixth graders about the hot lunch menu: unappealing; tasteless; too skimpy. After a class meeting, the 26 pupils in Room 210 decided to fix sloppy joes. Committees were formed and assignments of food items to be brought from home were completed, following delivery of a recipe from our dietitian.

The following day was a bit unusual—even for my unpredictable class. Electric fry pans appeared, along with quantities of hamburger, buns, onions, and other ingredients. Eyes were dried and redried as onion-chopping progressed. The students gained an appreciation for the amount of work involved in preparing food in large quantities but thoroughly enjoyed eating the results of their labors. Our second cook-in, a spaghetti dinner, was also pronounced a success.

Earth Day led my pupils to make a movie on pollution. After they had written the script, they laid out sequence frames (with the help of the audiovisual director). Now they were ready to shoot *The Conversion of a Slob*. Animation techniques were used, with the children moving the figures a fraction of an inch at a time and taking single frames with a movie camera. A second film dealing with manners, produced later, involved hand puppets. The most popular scene proved to be the one in which the ill-mannered villain was hit in the face with a pie plate containing shaving cream.

We had no regular science classes in Room 210, but each student had to complete a science project. Some grew crystals in a thermistor-controlled tank. One girl built an electrical generator that operated with a waterwheel, another a telegraph. A boy laid out a scale drawing of the solar system along a 350-foot hallway, only to find that even though his sun was a mere seven-eighths of an inch in diameter, the last planet was beyond the end of the hall.

Excitement reigned as the Apollo astronauts prepared for their trip to the moon. My class wanted to see for themselves what the moon was like, so they built a telescope. The students ground and polished a six-inch mirror for weeks before it was good enough to be coated. School closed shortly after it was finished, but the pupils returned often to look at the heavens through *their* telescope.

What is the prime ingredient for a program of this kind? The answer is flexibility. This is easy if the teacher is dedicated to the twin concepts that school should be fun and instruction tailored to individual needs. To me, success in education does not depend on special devices but rather on the teacher's ability to assume the role of resource person. Only then can he enable each child to grow to his fullest—to give him faith in his worth as an individual.

—Robert E. Migneault, *sixth grade teacher, Prairie View School, Eden Prairie, Minnesota.*

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FOR YOUR INFORMATION

HELEN BAIN, NEA President; SAM M. LAMBERT, Executive Secretary; JOHN D. SULLIVAN, Assistant Executive Secretary for Communications and Public Relations, and Publisher of TODAY'S EDUCATION (NEA Journal).

NEA headquarters: 1201 16th St., N.W., Washington, DC 20036. Telephone: Area Code 202, 833-4000.

1971 NEA Convention: June 27-July 2, Detroit.

American Education Week—October 24-30, 1971. Theme: Help Schools Bridge the Gap.

NEA membership, May 31, 1970: 1,100,155.

NEA officers and headquarters staff: See NEA HANDBOOK pages 8-13; and inside back cover. NEA resolutions: HANDBOOK, pages 64-83.

NEA divisions, special projects, commissions, council, committees: HANDBOOK, pages 92-160.

NEA departments, national affiliates, and associated organizations: HANDBOOK, pages 161-214

NEA dues: Active Membership $25 a year. Associate Membership $25. Life or Associate Life Membership $500 each or $55 a year for 10 consecutive years. Retired Membership $2 a year. Educational Secretary Membership $10 a year. Student NEA Membership $2 a year through Student NEA Chapters only. Reserve Membership $12.50 a year.

World Confederation of Organizations of the Teaching Profession: Information free from WCOTP, 1330 Mass. Ave., N.W., Washington, DC 20005; see HANDBOOK, pages 403-405.

"Big day at school! Fort Sumter was shelled . . . terrible fight at Gettysburg . . . and Mr. Lincoln got shot!"

NEA SPECIAL SERVICES

Discount Book-Purchase Program

The NEA Special Services Division is again making available a special discount book-purchase program to members of the United Teaching Profession. For the fourth consecutive year, the Division is offering members the opportunity to purchase books at a discount for gift giving as well as for personal reading.

The books available include best sellers, the most popular titles on previous years' lists, classics, and reference books. Each of the nearly 100 titles available has been selected with members' interest in mind on the basis of statistics compiled from previous book offers.

One of the special features of the program is that any member whose orders total $12 or more will receive a free copy of *Bennett Cerf's Treasury of Atrocious Puns.*

This year the selections include two of the best sellers of 1970—*Love Story* by Erich Segal and *Zelda* by Nancy Milford. Some of the newly published editions are: *Eco-Catastrophe* by the editors of *Ramparts* magazine, *Civilisation* by Kenneth Clark, *Complete Guide to Hunting Across North America* by Byron Dalrymple, *Harper Encyclopedia of the Modern World* edited by Richard B. Morris and Graham W. Irwin, and *Bomber* by Len Deighton.

Other titles include:

- General Interest—*The Sense of Wonder* by Rachel Carson and *House Made of Dawn* by N. Scott Momaday.
- Special Interest—*The Treasure Chest* compiled by Charles L. Wallis; *Reality Therapy* by William Glasser, M.D.; *Schools Without Failure* by William Glasser, M.D.; and *Predicting Reading Failure* by K. De Hirsch, J. Jansky, and W. Langford.
- For Young Readers—*Charlotte's Web* by E. B. White, *Stuart Little* by E. B. White, *Goodnight Moon* by Margaret Wise Brown, and *Stevie* by John Steptoe.
- Reference—*Dictionary of Word and Phrase Origins* (Volumes I and II) and *Beginning Secondary School Teacher's Guide* by Melvin Keene.

Still other selections include *The Tall Book Series; Popular Science Skill Books; The Masterpieces of World Literature in Digest Form* (Volumes I through IV); *Little Bear,* one of the well-known books of Else Holmelund Minarik; and *Little House in the Big Woods* and *On the Banks of Plum Creek* by Laura Wilder.

Books available from the Special Services Division were listed in the October issue of the *NEA Reporter.* Anyone who wishes the complete listing may obtain one by writing to the NEA Special Services Division, 1156 15th St., N.W., Washington, DC 20005.

UNFINISHED STORY

The editors present this story for classroom use as a basis for group discussion, role playing, or creative writing. They also call attention to a booklet containing 44 of the most popular unfinished stories, now available for 75¢ (2-9 copies, 10 percent discount; 10 or more copies, 20 percent discount) from the NEA Publications-Sales Section, 1201 16th St., N.W., Washington, DC 20036.

What Should Troy Do?

Ever since Troy's mother had gone to New York to work and left him with his grandmother, Troy had been miserable. He used to be able to run with the gang and do anything anybody else could do. Grandma, though, was so afraid something would happen to him while he was in her charge that she even walked to and from school with him every day.

When Troy's class went on a field trip, his grandmother kept him at home. "Just suppose there was an accident and I had to tell your mother you were in the hospital," she would say. She didn't let Troy play on the baseball team, either, because she once knew a boy who'd had his head split open by a bat.

Grandma did let him go to Scout meetings after school, but when the troop had gone on an overnight campout at Mountain Lake, he couldn't go. Boys often drowned or got lost on camping trips, she said.

He was left out of everything that was fun or exciting, and he was losing all his friends. He felt desperate because his mother couldn't possibly send for him until June, and he didn't see how he could last out till then.

One day the teacher told about a field trip she'd planned for the next day. She had arranged for the class to go to the Navy Yard for a tour through a real submarine and a real destroyer.

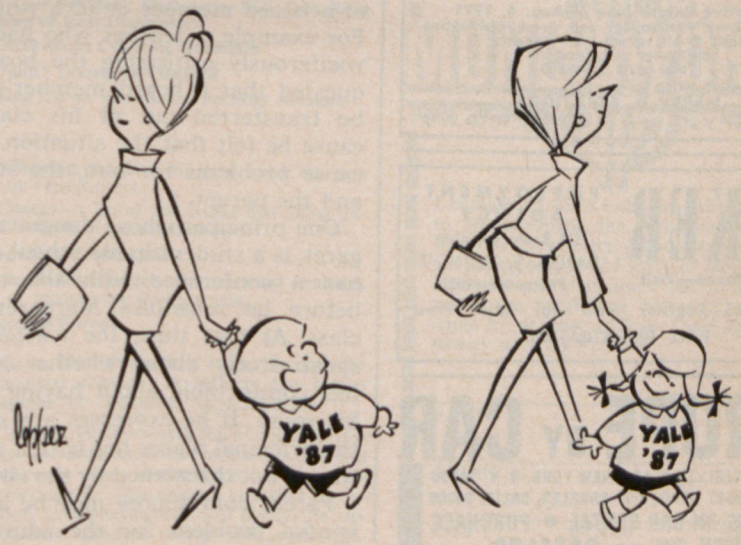
Troy could imagine what Grandma would say about the trip. "You could fall off the dock, or the sub could sink, and how could I tell your mother?" He didn't even ask her to sign his permission slip because he knew that she would refuse.

The next morning when the time came to go out to the bus, Troy realized that the teacher had not collected the permission slips. Perhaps this was his chance. Why shouldn't he simply get on the bus with the others? Of course, the teacher would be angry if she realized he'd gone without a slip, and Grandma would be furious if she found out. Still, nobody had told him not to go. Would it be very wrong for him to make the trip?

What should Troy do?

Thoughts To Think Aloud:

1. Would Troy be justified in going on the trip to the Navy Yard?
2. What might happen if Troy wrote to his mother about his problem?
3. If Troy told the teacher about his grandmother's fears, do you think she might be able to convince the grandmother that it was unnecessary for her to worry so much about him?



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FAMILY RELATIONSHIPS IN THE SCHOOLS

(*Continued from page* 13)

Parents, pupils, and sometimes even professionals on the school staff will say, "Smith's kid got an A, a part in the school play, excused from school early, a scholarship [pick one or more] just because he's the principal's kid."

Of course, in some cases, the charge may be true. There have been instances when a board member or an educator has applied pressure to get his child special honors or a less severe punishment than other pupils who had committed the same offense. As one schoolman points out, "There will always be people in influential positions who will use their power to better their own, their family's, and their friends' positions. It happens in all walks of life, but educators are supposed to be above this sort of opportunism."

To avoid charges of favoritism, educators whose children are in the same system or the same school with them may not treat their children as generously or as kindly as they do other children.

In some instances, Mr. Smith's kid may receive the brunt of another professional's anger toward the parent. For example, a teacher who has the principal's son in class may take out his anger with the principal on the boy. As one teacher explains, "Some gutless teachers can't openly disagree with the principal because they're afraid they may lose the argument. So they vent their fury on his child."

While Mr. Smith's kid is suffering, so are some of the teachers who must work with him. Sometimes a teacher feels uncomfortable to have as a pupil the child of another teacher or of a board member or of a principal. For example, a teacher who had been vociferously criticizing the board requested that a board member's child be transferred out of his class because he felt that the situation might cause problems for him, the student, and the parent.

One principal whose daughter, Margaret, is a student in his school always has a conference with the teacher before he schedules Margaret in a class. At that time, the teacher may speak freely about whether he will feel comfortable about having her in his room. If he expresses any doubts, the principal places her with a teacher who is not threatened by the situation.

Parent conferences may be another special problem for the educator if the parent is a board member or the superintendent of the school system in which he teaches. One former teacher, recalling his experiences in this area, says, "Such conferences were always polite, perfunctory, and not really productive as far as communicating with the parent about the child." Recognizing this, one superintendent and his wife have agreed that the wife will always go to parent-teacher conferences. They hope that the teacher will be more at ease if the superintendent-parent isn't present.

The principal who must deal with his staff's children also operates in a delicate area of human relations. If he must take disciplinary action against the art teacher's son, for example, the situation is rife with possibilities for hard feelings all around. Realizing this, one former principal always conferred with the assistant principal about any action involving a staff member's child—a practice he did not usually follow with other pupils. In addition, he also talked with the teacher-parent about any action that was taken and the reasons behind it.

Family relationships in the schools . . . delicate situations. But then isn't this so everywhere else? □

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"The question isn't if I can accept failure, it's whether my parents can."

YOU'RE BEING ROBBED!

Virtually every time that you spend money, whether at the supermarket, department store, drugstore, or gas station, you're being ROBBED! You're being duped, hoodwinked, and swindled out of the full value of your money by a combination of deceptive selling techniques that include Madison Avenue double-talk, mendacious salesmanship, and insidious labeling and packaging ploys. Senator Warren Magnuson, the most alert consumer watchdog in Congress, says that deceptive selling is today's "most serious form of theft, accounting for more dollars lost each year than robbery, larceny, auto thefts, embezzlement, and forgery combined." Sidney Margolius, the dean of American consumer writers, asserts that "Never in the 30 years I have been reporting on consumer problems has the public been as widely and steadily exploited as today." And Ralph Nader, the nation's most renowned champion of consumer rights, states that "Nowadays consumers are being manipulated and defrauded not just by marginal,fly-by-night hucksters, but by America's blue-chip business firms." In short, commercial flimflammery is rife throughout the nation and the American consumer is being victimized as never before. As a partial antidote to this widespread fraud and deception, an intrepid, authoritative, new publication has been launched. Its name is **Moneysworth.**

Moneysworth, as its name implies, aims to see that you get full value for the money you spend. It rates competitive products as to best buys (as among cameras, hi-fi's, automobiles, and the like); it offers tips on how to save money (they will *astound* you with their ingenuity); and it counsels you on the management of your personal finances (telling not only how to gain maximum return on your investments and savings, but also how to protect your money against the ravages of inflation). In short, **Moneysworth** is your own personal consumer crusader, trusted stockbroker, and chancellor of the exchequer–all in one.

Perhaps the best way to describe **Moneysworth** for you is to list the kinds of articles it prints:

Earn 12% on Your Savings (Fully Insured)

How to Buy A Car for $125 Over Dealer's Cost

Inaccurate Billing by the Phone Company

The Advantages of a Swiss Banking Account

The New U.S.-Made Minicars: An Evaluation

14 Recession-Wracked Cities Where Real Estate Is Selling for a Pittance

"Consuming Fire"– **Moneysworth** takes aim at companies that are defrauding the public.

Unsafe at Any Height–A comparison of the safety records of America's airlines.

Free Land and Free Money from Uncle Sam

Stocks that Are on the Rebound

Send Your Child to College Abroad

The Moneysworth Co-operative–Details of a price-discount co-op (for purchasing typewriters, cameras, and the like) that **Moneysworth** subscribers automatically become members of.

How Much Are You Worth?–An amazingly simple chart gives you the answer in 60 seconds.

High-Priced Lemons– Mechanical failures on brand-new Imperials,Continentals, and Cadillacs.

The Link Between Heart Attack and Coffee

The Economics of Being Black

Cashing In on Canada's New "Floating" Dollar

Cyclamates: Did America Overreact?

How to Buy Art Without Getting Framed

Critics' Consensus–A regular feature of **Moneysworth** in which the opinions of leading book, record, and film critics are tabulated.

"Unit-Pricing"–The most revolutionary development in food stores since trading stamps.

The Effect of Air Pollution on Potency

The Great Odometer Gyp–How rent-a-car companies take the American public for a $10-million-a-year ride.

"No Load" Mutual Funds–A list of 45 funds that return the equivalent of an 8% profit at the very moment of investment.

12 Ways to Put the Touch on Friends–And 12 ways to demur.

How to Buy Medical Insurance Without Trauma

The Encouragement of Reckless Driving by GM, Chrysler, and Ford–Verbatim quotes from their souped-up ads in hot-rod magazines.

Taking Stock of Your Stockbroker–Nine ways to probe his probity.

Legal Ways to Beat Sales Taxes

Co-ops and Condominiums Explained

"The Safest Car of 19_"–A new series of annual awards by the editors of **Moneysworth.**

How to Break a Lease

Land Investment in Australia–At $1.20 an acre, land down under rates high among speculators.

How to Sue Without a Lawyer

The Impending Ban on Leaded Gasoline–How it should affect your next car purchase.

A Guide to Legal Abortion–Including the costs in different states.

And Now, Microwave Pollution–An exposé of the damage wrought to humans by radar, electronic ovens, and TV transmission.

Social Security's Special Rules for Women

Life Insurance: A Legalized Swindle–A Hartford actuary tells why he believes that "more than 90% of American policies are sold through misrepresentation, deceit, and fraud."

Teaching Your Child the Value of Money–Without having him *over*value it.

How to Handle Computerized Dunning Letters

Taxproof Money–A collection of highly creative, little-known, perfectly legal gimmicks.

How to Distinguish Health from Hokum at the Health-Food Store

Blindness Caused by Contact Lenses

G.E.'s New Synthetic Diamonds: Will They Ruin the Value of Real Diamonds?

The Truth about Cut-Rate Gasolines

"No-Fault" Insurance Clarified

Checking Up on Your Social Security Account

Stop Chewing the Fat–How to read the new labels on frankfurters.

Free Checks–A list of 200 banks that allow unlimited writing of personal checks.

Bootleg Birth-Control Pills

When in Doubt, Deduct–The ten most common forms of income-tax overpayment.

$99 Fares to Europe

In sum, **Moneysworth** is a hip, trustworthy financial mentor. It reflects the quintessence of consumer sophistication.

In format, **Moneysworth** is a newsletter. It is designed for instantaneous communication and easy reference when you're shopping. It is published *fortnightly.* This ensures you that the information in **Moneysworth** will always be up-to-the-minute. Product ratings will appear precisely when you need them most (automobiles and sailboats will be rated in the spring, for example, and Christmas gifts and ski equipment in the fall.)

In style, **Moneysworth** is concise, pragmatic, and above all, useful. It is also completely forthright. **Moneysworth** does not hesitate to name brand names (whether to laud or lambaste them), to identify big corporations when they gouge the public, and to quote the actual prices and discounts that you are entitled to and should be getting. **Moneysworth** can afford to be this candid because *it carries no advertising whatsoever; it is beholden to no one but its readers.*

The editors of **Moneysworth** are a team of hard-nosed, experienced journalists. The editor-in-chief is Ralph Ginzburg, creator of the flamboyant magazines Fact, Eros, and Avant-Garde. Mr. Ginzburg was the first editor to provide a platform for Ralph Nader to express himself on the subject of automobile safety. **Moneysworth's** publisher is Frank R. Brady, generally regarded as one of the publishing industry's shrewdest financiers. Herb Lubalin, the world's foremost graphic designer, is **Moneysworth's** art director. Together, these men will produce the first–and only–consumer magazine with *charisma.*

Moneysworth is available by subscription only. Its price is $10 a year. However, right now you may order a special introductory Charter Subscription for ONLY $5! This is HALF PRICE!!

Moreover, we are so confident that **Moneysworth** will prove indispensable to you that we are prepared to make what is probably the most generous subscription offer in publishing history: *We will absolutely and unconditionally guarantee that* **Moneysworth** *will increase the purchasing power of your income by at least 15%–or we'll refund your money IN FULL.* In other words, if you now earn $10,000 a year, we'll guarantee that **Moneysworth** will increase the value of your income *by at least $1,500*–or you get your money back. As you can see, a subscription to **Moneysworth** is an absolutely foolproof investment.

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We urge you to act at once. Stop being robbed and start getting your **Moneysworth.**

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AFTER ALL

□ **In olden days—to your students,** that means when you were young, but for our purposes here it means back in storybook times—a magic word or phrase could take care of everything. "Open sesame" did the trick for Aladdin; "Rumpelstiltskin," for the miller's beautiful daughter who became a queen because she was able to spin gold out of straw.

We have our share of meaningful words today, but somehow they don't exert much magic. A is for accountability; B for bussing . . . on through the alphabet to R for relevance, S for sex education . . . down to Z for zealous adherents and equally zealous opponents.

Yesterday everyone thought we had at last found the magic word. *Ecology* promised to be the battle cry about which young and old, rich and poor, black and white, urban and rural, men and women could rally. We told each other that if we didn't clean up our planet—its land, its air, its water—it would soon be nothing but a huge garbage can.

That was yesterday. Already interest is fading. The comfortable assurance is being passed around that the outlook shouldn't horrify. For those less sanguine but equally prone to rationalization, the popular refrain goes that government and industry are the villains and until these two giants reform, ordinary citizens can't do much to improve conditions anyway.

So people, with a clear conscience, discard their concern over pollution and return to their old causes or embrace new ones. In truth, old causes and new now clamor for and deserve attention. But as a nation do we not have enough energy, enough intelligence, enough know-how to attack the continuing issues of environment at the same time we are tackling our other problems—educational, social, and economic?

No matter how many other important battles he wages, the educator, especially, must not abandon his ecological responsibilities this year or next or a decade from now. And, fortunately, the teaching profession—or at least the organized profession—has not joined the ranks of the backsliders.

The NEA Representative Assembly in 1970 passed a resolution (70-24) expressing concern "for an improved environment conducive to physical and emotional well-being." The Association strongly urged school systems "to include environmental education and human ecology programs in their curriculum and to observe Earth Day annually" and supported "legislation and appropriations to preserve our natural environment."

The Assembly ordered creation of an NEA Task Force on Environmental Education to develop curriculum guidelines from kindergarten through adult education, these to include emphasis on the problems of pollution, human hunger, and population. Through the Task Force, NEA can lead in providing the most comprehensive environmental education programs ever offered the schools.

The Task Force will build upon the work of current and proposed projects within the NEA units, such as Project ME (Man's Environment)—a 1969-70 joint effort of the American Association for Health, Physical Education, and Recreation and the National Park Service of the Department of the Interior.

Information to help you plan and implement classroom study of man's environment is available in a guide, *Man and His Environment: An Introduction To Using Environmental Study Areas,* published by the Association of Classroom Teachers in cooperation with Project ME. (56 pp. $1.75. 20% discount for NEA members. Stock No. 246-25118. Order from NEA Publications-Sales, 1201 16th Street, N.W., Washington, DC 20036.)

State education associations too are active on the antipollution front. The Indiana State Teachers Association has given monetary awards for continuation of worthwhile antipollution projects initiated in Indiana schools. The Washington Education Association reserved its highest honor of 1970 for an individual or group that had done the most in environmental quality control.

State associations in Pennsylvania, Ohio, and California, among others, made available to teachers teach-in kits for Earth Day. Many state associations have devoted entire issues of their magazines to environmental education and have developed public-service radio and TV spots.

Last winter the Utah Education Association adopted a position paper advocating a wide range of action proposals on environmental issues. The Iowa State Education Association sponsored, among other activities, a Conference on Pollution and Environmental Education, covered by educational TV.

For a glimpse of current school activities, see the special feature, pages 14-29. These articles present but a few of the many examples which could have been cited. We are happy to present these cases, but in addition we would like to hear from certain teachers. *Please write us if you are:*

A home economics teacher whose students use only biodegradable detergents; buy soft drinks in returnable containers; limit their purchase of paper plates, napkins, tissues.

A civics teacher whose students protest open burning of trash, boycott companies that pollute.

A teacher whose students walk or ride bicycles to school as their way of cutting down on air pollution and of getting a message across to automobile manufacturers.

A teacher whose students are learning to accept inconveniences and sacrifices as part of the price to be paid for meeting the environmental challenge.

A teacher—a most influential teacher, after all—whose students realize that in the conquest of pollution no Aladdin will rub a magic lamp, no miller's daughter will spin gold out of straw or miracles out of good intentions. □

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TOM JONES Without Love (There Is Nothing) 10 MORE 191734
Andy Williams Raindrops Keep Fallin' On My Head 192187
SANTANA 181909
The Best of Peter, Paul and Mary TEN YEARS TOGETHER 191809
Burt Bacharach BUTCH CASSIDY AND THE SUNDANCE KID Raindrops Keep Fallin On My Head Sung by B.J. THOMAS 186114
CROSBY, STILLS NASH & YOUNG DALLAS TAYLOR & GREG REEVES Déjà Vu 188060
FRANK SINATRA'S GREATEST HITS 168989
MARTY ROBBINS My Woman, My Woman, My Wife 190546
STEPPENWOLF MONSTER PLUS Move Over 185017
THE BEST OF TOMMY JAMES & THE SHONDELLS 185876
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